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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

Vol. 90, No. 12 DECEMBER, 1937 Member A.B.C.–A.B.P.

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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

ROBERT H. LOCKWOOD
Associate Editor

FRED SHEPPERD
Editor

N. N. WOLPERT
Assistant Editor

The members of the staff of FIRE ENGINEERING wish all our Friends in the Fire Service

A Merry Christmas !

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Greetings for a Safe 1938

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WE RESOLVE that our Community shall be further protected from fire hazards by the installation of Sufficient, Dependable Fire Alarm Boxes. To that end we shall install, without delay, enough of the Gamewell Three-Fold Fire Alarm Boxes to insure the Safety and Happiness of our People, Homes and Property!

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"There is practically no city where there are enough fire alarm boxes!"—United States Chamber of Commerce.

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FIRE ENGINEERING

The Journal of the Fire Protection Profession

Volume 90 DECEMBER, 1937 No. 12

WITH THE EDITOR

Life still hath one romance that naught can bury—
Not Time himself, who coffins Life's romances—
For still will Christmas gild the year's mischances,
If Childhood comes, as here, to make him merry.
—Theodore Watts-Dunton

Christmas Christmas is the big day for youth. Its patron saint, Santa Claus, has been enshrined by the youngsters. But grown folks, too, being children of a larger growth, partake in the preparation for, and celebration of, the day with full vigor. However, it is largely around the small ones that Yuletide festivities revolve. Where there are children, there will be an exciting Christmas for all.

It is quite natural that adults with children, as well as those not so blessed, but who recollect their own childhood happiness associated with the day, should take pleasure in contributing to the enjoyment of the young.

It's logical, therefore, for Fire Department members to take an interest in Christmas for the youngsters. Many fire companies are today at work rebuilding discarded toys for the less fortunate children, and the happiness they create cannot be measured in money. Actually hundreds of thousands of toys are thus provided each year. It is a popular and charitable activity for those in the fire service who have the time, the ability and the desire to create happiness.

But one word of caution: observe the rules of "good housekeeping" that are expected to be enforced in "wood workers," paint shops and toy factories. It would be a black eye to this charitable enterprise to have a fire station burn down due to carelessness on the part of Santa Claus' volunteer helpers.

And while we're on the subject of Christmas, may we extend to all our friends in the fire service our sincerest wishes for a very merry Christmas.

* * *

Arson Investigators and Master Mechanics The Round Table discussions at recent conferences of the International Association of Fire Chiefs have shown the value to the organization of having fire department master mechanics and arson investigators on hand.

These men, specialists in their respective lines, were able to shed light on many topics presented for treatment at the conferences.

There seems to be more than a passive need for the presence of these specialists at the annual meetings.

For example, when the discussion turns to motor apparatus, master mechanics are infinitely better equipped to discuss with authority that subject than are executive heads of many departments. Likewise, when the subject of arson is treated, those men who devote all their time to investigation of suspicious fires are in a position to talk with greater authority than those over them, but who are not closely in contact with the detail work represented by these activities.

Is not there a place in the International Association of Fire Chiefs for a Master Mechanics Section and an Arson Section?

Fred Sheppard

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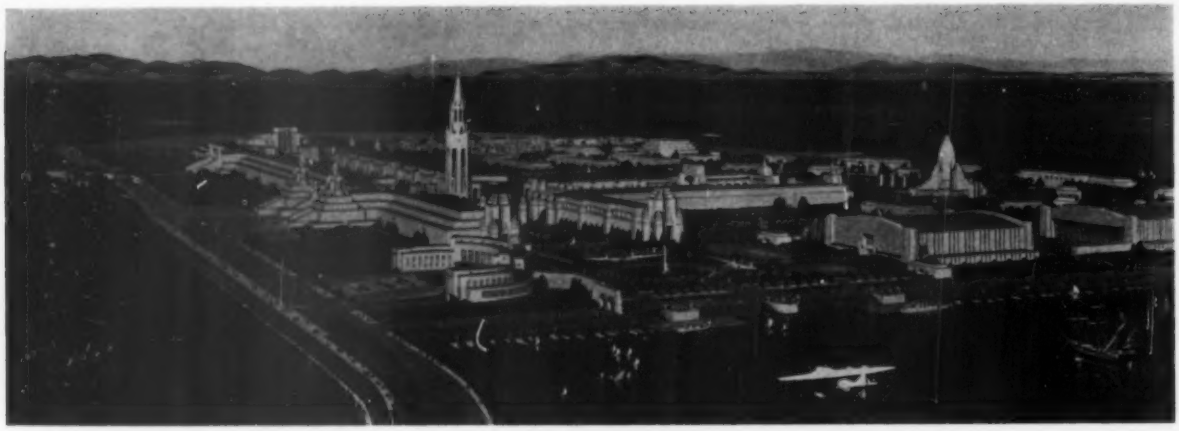


The Golden Gate International Exposition Island as It Will Appear in 1939

View taken from the shore of Yerba Buena Island, looking north. In immediate left foreground is a 110-foot causeway, serving as a boulevard approach from the San Francisco-Oakland Bay Bridge. At right is Exposition Harbor, 1,500 feet wide and 3,400 feet long. The Exposition Administration Building, which is to serve as a future airport terminal, is the first structure to the right of the roadway. The main entrance to the Exposition is half-way up the Boulevard, with the Exposition ferry terminal beyond. To the extreme right are the two permanent airport hangars, which will serve as exhibit palaces, and behind the hangars is the Lake of All Nations. The central unit of the two major axes of the Exposition exhibit palaces is the 392-foot Exposition tower in the center.

Safeguarding a "Magic City" From Fire

Unusual Fire Protection Problems Solved in Construction and Arrangement of Buildings and in Fire-Fighting Facilities at the Golden Gate International Exposition at San Francisco

By PAUL CONANT

THE visiting public may describe the 1939 Golden Gate International Exposition as a "magic city," or as a "jewel afloat upon a sea of light," but to the fire fighter or the insurance man it will remain a valuation exceeding $40,000,000 that must be protected under very unusual conditions.

Already under advanced construction, the World's Fair plam is located on a 400-acre island that was dredged from the bottom of San Francisco Bay over the Yerba Buena Shoal. It lies 900 feet north of Yerba Buena Island, which is the central point of the San Francisco-Oakland Bay Bridge, and is connected to the bridge by a system of causeways and roads.

"Treasure Island" is 8,700 feet from San Francisco's pierhead line, and 4.7 miles from the downtown district via the bridge. Although it is within the corporate limits of the city and county of San Francisco, its distance from established facilities requires that it be handled and equipped, from a fire-fighting standpoint, almost as if it were a separate municipality.

Another factor taken into consideration was the future permanent utility of this mile-long island. After the 1939 World's Fair is over, it will become a municipal airport with only three structures—and these of permanent steel and concrete construction—left standing. During the Exposition, the safeguards must be very complete; later, when the number of buildings and hazards have been reduced, the protective measures can also be reduced.

These conditions were borne in mind from the beginning, so that the three primary factors—water supply, signal systems and Fire Department organizations—were coordinated in the light of requirements. The three permanent structures, practically completed and nearly ready for use by the World's Fair, present certain particular problems, due to occupancy.

High Value Collection Requires Close Protection

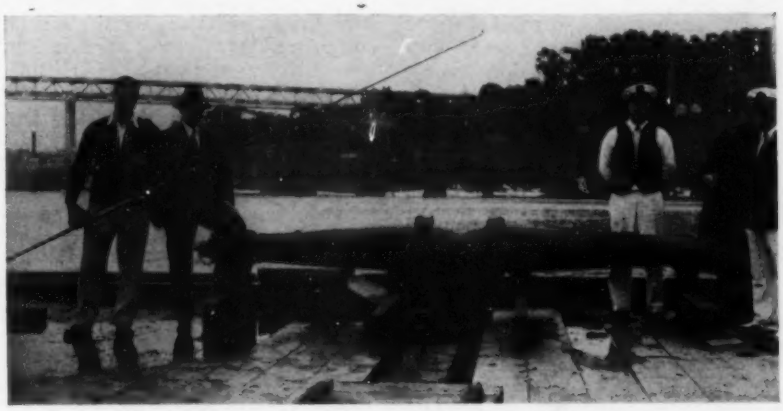
One permanent building is a three-story reinforced concrete Air Terminal Building, which will be used by the Exposition as administrative headquarters and will also house offices of the Exposition Fire Chief, telephone control, fire alarm control and other nerve centers. The other, two steel and concrete hangars each 287 x 335 feet and 76 feet high, will contain the Fine and Liberal Arts collection, and the exhibits of certain foreign nations. The Fine Arts collection, particularly, with a valuation that may reach $20,000,000 requires close protection.

Fire Stations Strategically Situated

Consequently the easterly of these hangar-exhibit buildings will house one of the Fair's two fire stations; the other station will be located at the northwest corner of the island, near the three ferry slips that will land visitors at one of the main entrances. The whole of the World's Fair layout lies between these two stations, so that an efficient assignment system may be worked out to cover calls from any part of the island.

Strictly Exposition buildings will be of massive timber and cement

stucco construction. They will range in size from huge subdivided exhibit halls, averaging 200 feet wide and 400 to 900 feet long, down to small buildings constructed by individual exhibitors. This program, already well under way, constitutes one of the greatest timber construction projects of modern times, and calls for some 20,000,000 board feet of lumber for Exposition central-group structures alone.



Fireboat Manifold Installed on Treasure Island

Through this manifold salt water may be pumped directly into the fire protection system of the exposition. It will handle ten lines, with a capacity of 5,000 gallons at 150 pounds pressure.

All Fire Precautions Taken

The layout of the World's Fair plant follows the scheme of an ancient "walled city," with wide courts, framed by the big exhibit halls radiating in three directions from the 400-foot central tower and its plaza. Fire Department execution was considered even in the ground plan; most of the avenues are 100 feet wide, the arterials are 120 feet, and the narrowest—a few short streets to be lined with small structures—will have a width of 60 feet. Special attention was given to curbs and corners, for safe handling of apparatus.

Avenues and building locations were planned with reference to exposure-distances and firebreaks between structures. All building construction is under uniform regulations governing permissive standards, including exterior fire-retardant material, fire-stopping in the framing, elimination of concealed draft openings, protection of flues, wiring installations, electrical appliances and other hazards.

The big exhibit halls are being provided with interior fire walls at suitable intervals, built of a new lightweight heat-resistant material, based upon a volcanic ash quarried near Napa, Cal. In test sections one-inch thick, the material used for these walls has withstood a flame of 2,200 degrees Fahrenheit for 75 minutes, after which the back of the wall was only slightly warm to the touch. In another test, a flame of 6,200 degrees was applied for 15 minutes, and no heat whatever was passed through the sample.

Water Supply Brought From San Francisco to Island

Water supply will be brought to Treasure Island from San Francisco through a 10-inch steel pipeline across the Bay Bridge, articulated by means of specially-designed rotating spherical joints, to accommodate flexing of the bridge structure. The pumping system is being installed at the base of Pier W-1, near the San Francisco Embarcadero, and will have a maximum pumping capacity of 1,750 gallons per minute. It will consist of two main units, with capacities of 1,750 and 1,250 g.p.m., and two auxiliary units capable of 175 g.p.m. each.

On Yerba Buena Island the pipeline will discharge through 1,000 feet of 12-inch cast iron pipe into a 3,000,000-gallon storage reservoir, excavated into the rock at an elevation of 260 feet at waterline. From the reservoir, a 22-inch welded steel main will drop to the north end of the 900-foot causeway connecting Yerba Buena and Treasure Islands, and a 20-inch main will carry the water to the distribution system on Treasure Island. Special provisions to resist earthquake damage have been made in this supply main. Delivery of water to the Exposition Island is expected by December 15, 1937.

Separate High Pressure Fire System

The distribution network on Treasure Island includes a domestic system and an entirely separate high-pressure fire system. The high elevation of the reservoir will yield a residual pressure of 97 to 105 pounds per square inch, with a fire flow of 5,000 gallons per minute in a concentrated area.

In addition, a fire-boat manifold is being installed, which will handle ten lines, with a capacity of 5,000

The Proposed San Francisco Airport, to Be Opened in 1940

It is to be located on Treasure Island, which has been dredged from the bay and situated on Yerba Buena Shoal. The 400-acre island is first to be the Golden Gate International Exposition, and after the termination of the exposition, is to be made into an airport. Three permanent buildings of the exposition will be retained, as shown above, the Administration Building, which will serve as an Airport Terminal, and the two hangar buildings. The three structures, financed by PWA grants, will cost more than $1,600,000 and will be used during the exposition respectively as administration building and exhibit palaces. View taken from San Francisco-Oakland Bay Bridge, looking north-east, with the Berkeley Hills in background.

gallons upward at 150 pounds pressure. Through this manifold, salt water from the Bay may be pmuped directly in to the fire protection system. Gate and check valves will protect the domestic system from any possibility of pollution in case it ever becomes necessary, during the Fair, to call upon San Francisco's two fireboats for help.

Fire Protection Mains

The distribution system for fire protection is entirely circulating, consisting of a 16-inch loop cross-connected with 12-inch and 10-inch pipe in the outlying sections, and short reaches of 8-inch.

Adequate protection against rupture is given by scores of control gate-valves, and the circulating system covers the interior courts of the Exposition, as well as areas reserved for the 40-acre Midway and the buildings to be erected by individual exhibitors.

One of the Fire Trucks at the Golden Gate Exposition

Standard Double Fire Hydrants Installed

Approximately 200 standard double fire hydrants are being installed, with standard thread interchangeable with San Francisco Fire Department hose. They are spaced to bring a maximum volume of water into given areas, with minimum hose-lengths. The Exposition Fire Department will be able to throw from 5,000 to 10,000 gallons per minute through 10 to 20 hydrants or a combination of hose and battery streams.

Treasure Island Fire Brigade

This Treasure Island brigade will be a two-platoon fire department of 80 men, operating on San Francisco Fire Department standards and under direct control of Fire Chief Charles J. Brennan, San Francisco. An Exposition Fire Chief and Assistant Chief will be in daily charge of equipment and fires, reporting to Chief Brennan. Apparatus will be housed with firemen in two stations provided with adequate dormitories, eating quarters and offices for firemen on duty.

These stations, as explained, are located at diagonally opposite corners of the 400-acre island, distant from the vehicular causeway, so that a minimum of traffic congestion will be encountered on runs, and with the area of highest hazard directly between them.

Equipment of Fire Brigade

Equipment, which will be manned according to National Board standards, will be as follows:

Five hose wagons, each carrying 1,000 feet of hose, 12-foot extension ladders and other standard equipment. Two of these will carry water tanks and booster-pumps with small hose, in accordance with the modern trend away from chemicals. The other three will mount turret pipes.

Two 85-foot aerial ladder trucks, with special ladder equipment suggested by the type of service required by an Exposition, where there will be no rescue work involving exact placement at windows on upper stories. It is planned to use the aerial ladders in place of water-towers.

The Chief and Assistant Chief each will be provided with proper cars. The high elevation of the reservoir, and the pressures that can be delivered by fire boats, eliminate any requirement for pumpers.

Every part of the island is being equipped with a comprehensive ADT signalling system to bring the apparatus into action. Fifty street boxes, equipped with blinker lights and telephone service will be connected direct to the Exposition fire houses; to an ADT substation, Police and Fire Chiefs' quarters on the island, and to the ADT central office in San Francisco by leased submarine cable. These will operate through automatic circuits, with punch-registers and gongs. All alarms will be relayed automatically to the San Francisco Fire Department, which has also located six code signal boxes at various points on the island. Direct-connected with San Francisco, these may be used for summoning emergency special apparatus, fire-boats or manpower.

Complete Fire Alarm Systems

Interiors of all buildings will be equipped with Aero automatic fire alarm to give instant notice of inside fires. Aero will be used also in and under the ferry-boat wharves, and they are specified for buildings erected privately. There will be a total of 172 Aero circuits, working through 18 fire alarm transmitters, with annunciators on each building, installed for Exposition-built structures alone. Including the buildings of indivdual exhibitors, there will be about 350 Aero circuits on Treasure Island, with 36 transmitters. In addition there will be 100 manually-operated fire alarm boxes inside the Exposition buildings, and a Watchmen's Compulsory Tour system, using nine transmitters and 60 tour stations.

As now planned, a first alarm will be handled entirely by the Treasure Island department. A second alarm will empty the Island fire stations, and summon one fire-boat and rolling equipment from San Francisco. Further assignments, if any are required will be summoned by code signals.

System for Answering Alarms

At present, during construction and pending completion of the water systems, the San Francisco Fire Department is prepared to respond with engines, trucks, officers and fire-boat to calls from ten fire alarm boxes on Treasure Island, which come in through the ADT office in San Francisco. Special second and third alarm assignments have been worked out. The Bay Ridge Fire Department, stationed on Yerba Buena Island several miles closer than any San Francisco unit, is also prepared to respond to first alarms with booster pump, hose and chemical, at least until the

Treasure Island brigade is functioning.

No fire of any proportions has disturbed the construction scene on the island to the date of writing, and extreme precautions are observed to prevent any outbreak. One 52-gallon barrel of water is provided for each 2,500 feet of floor area; chemical extinguishers are maintained wherever advisable, and temporary water supplies maintained by contractors are centrally located and equipped with hose bibs. Smoking, inflammable materials, open fires and oily rags are rigidly regulated and subject to frequent inspection.

Fire Insurance Carried

The Exposition is insured against fire to a limit of $3,500,000 at the present writing, and as the buildings are completed the coverage will increase. Although perhaps $750,000 may be spent in insurance premiums twice that sum will be regarded as a good investment for precautions. Exposition fire insurance is carried under blanket policies—a syndicate for the purpose has been designated by the World's Fair management—but contractors, exhibitors and concessionaries are permitted to place their own insurance through their own brokers, subject to uniform specifications.

On every front, the Western World's Fair is forging ahead toward its opening day on February 18, 1939. Approximately $10,000,000 in construction is under way, with the permanent buildings practically completed and the six huge central exhibit halls past the 85 per cent mark for framing and sheathing. Ferry slips, highways and drainage systems are well along, and electrical installation will begin when other service conduits have been completed at the lower levels.

The Exposition's $16,000,000 construction program is in charge of W. P. Day, Vice-President and Director of Works, who has exercised general supervision over fire precautions and regulations. Fire insurance and allied lines have been delegated to a syndicate consisting of Marsh & McLennan-J. B. F. Davis & Son, Ltd.; Cosgrove & Co., Inc.; and Johnson & Higgins, California.

Sponsored by Eleven Western States

Fifteen foreign nations and nearly half the states of the Union have moved toward participating in the Exposition, which is sponsored by the eleven Western States. California, as host state, has appropriated $5,000,000 for her own buldings and exhibits, and the Federal Government has set aside $1,500,00 for the same purpose, in addition to WPA and PWA grants totaling about $6,250,000, which were used for reclamation of the island and for features of permanent airport utility.

The Exposition will run for 40 weeks, celebrating advances in western transportation and communication. Treasure Island is located between the two greatest bridges in the world, the $77,000,000 San Francisco-Oakland Bay Bridge and the $33,000,000 Golden Gate span; the Clipper Ships, "bridging" the Pacific by transporting passengers and cargo to the Orient in days instead of weeks, fly over it on their weekly schedule.

This Golden Gate International Exposition in 1939 will be a gigantic spectacle—a "Pageant of the Pacific" and all that—but to the fighter of fires it will remain, first and last, a problem of protecting that valuation of more than $40,000,000.

Medals for Flood Work

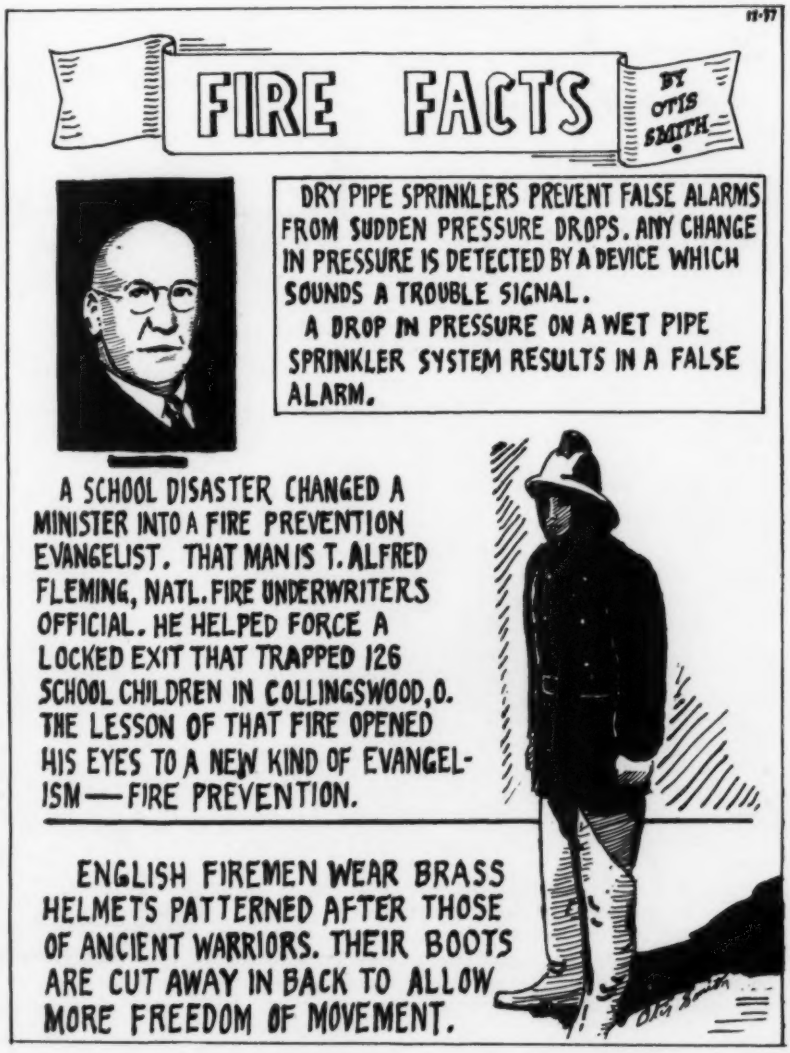
Three members of the Charlotte, N. C., Fire Department were honored recently when they were presented medals by the Junior Chamber of Commerce for service rendered in the Louisville, Ky., flood disaster of 1937.

D. G. SPENCER

Chief Stronach, Santa Barbara, Dead

F. W. Stronach, Chief of Fire Department at Santa Barbara, Cal., died of a heart attack while on a deer hunting trip in the Big Pine Mountain, fifty miles northeast of the city.

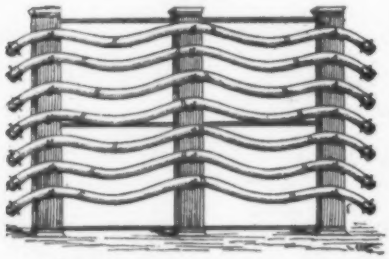
He was thirty-nine years old and had entered the service eighteen years ago as a hoseman. He was appointed Chief in June, 1933.


11-37
FIRE FACTS
BY OTIS SMITH
DRY PIPE SPRINKLERS PREVENT FALSE ALARMS FROM SUDDEN PRESSURE DROPS. ANY CHANGE IN PRESSURE IS DETECTED BY A DEVICE WHICH SOUNDS A TROUBLE SIGNAL.
A DROP IN PRESSURE ON A WET PIPE SPRINKLER SYSTEM RESULTS IN A FALSE ALARM.
A SCHOOL DISASTER CHANGED A MINISTER INTO A FIRE PREVENTION EVANGELIST. THAT MAN IS T. ALFRED FLEMING, NATL. FIRE UNDERWRITERS OFFICIAL. HE HELPED FORCE A LOCKED EXIT THAT TRAPPED 126 SCHOOL CHILDREN IN COLLINGSWOOD, O. THE LESSON OF THAT FIRE OPENED HIS EYES TO A NEW KIND OF EVANGELISM—FIRE PREVENTION.
ENGLISH FIREMEN WEAR BRASS HELMETS PATTERNED AFTER THOSE OF ANCIENT WARRIORS. THEIR BOOTS ARE CUT AWAY IN BACK TO ALLOW MORE FREEDOM OF MOVEMENT.

Some Notable "Firsts" in the Fire Service

A Chronicle of the Important Developments in Equipment and Personnel of Fire Departments Over a Period of Twenty Centuries, Continued from Last Issue

IT was a volunteer fire company that brought motor fire apparatus into existence, the Niagara Engine Co. No. 1, of New London, Conn. This company, at its own expense, devised and had constructed the first piece of motor apparatus, a combined hose and chemical wagon which went into commission October 3, 1903. It has been superseded after some years of excellent service by a more modern truck and is now kept by that company as a relic.



Rack for Drying Leather Hose, 1840

The Underwriters' Fire Patrol of Cincinnati was the next to have a motor vehicle, a salvage wagon, in May, 1903, which, with the exception of its chassis, was made by members of that company.

Joplin, Mo., had her first motor operated and driven engine September 8, 1908; Vancouver, B. C., the first motor ladder truck in 1909; Springfield, Mass., the first motor aerial truck in January, 1911; New York, the first motor water tower, February 11, 1911. This weighed ten tons and was the heaviest piece of fire apparatus then in service. New York had the first motor driven and steam operated engine March 20, 1911.

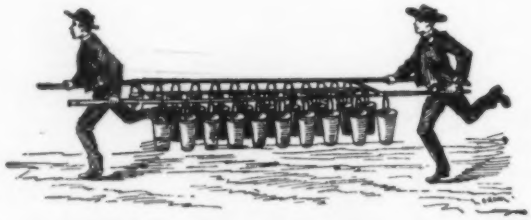
Chemical engines and extinguishers originated with Prof. James F. Babcock, a prominent chemist of Boston, and a state assayer. The Boston fire department was the first to use them in 1869. It carried portable extinguishers to fires as an experiment in a milk wagon. The experiment was very much of a success.

New York had the first horse chemical engine in 1872. It abandoned it for a short period because it was supposed that because fewer men were necessary to operate it than steam engines the city would soon substitute them for steam engines and many firemen would lose their situations.

New York, in 1722, had the first truck to carry ladders to fires, although ladders were among the first implements used to extinguish fires. Brooklyn had the next one in 1817; Boston, in 1821; and Philadelphia, in 1851.

The first aerial was invented by Daniel D. Hayes, a San Francisco fireman in 1868, and improved by him ten years later.

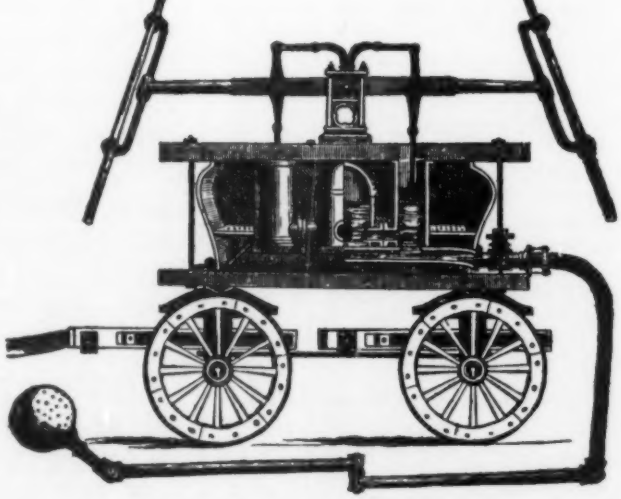
In 1873 Mrs. Scott-Uda, a Canadian woman, invented what is known as the "Scott-Uda" aerial ladder. There was an exhibition of the Scott-Uda ladder in New York, June 12 of that year. Many Chiefs were present who were entertained at a dinner in the evening by Chief Eli Bates of that city. At that dinner was started a movement which resulted in the organization at Baltimore, October 20, 1873, of the International Association of Fire Engineers.



Method of Carrying Fire Buckets

The first piece of combination fire apparatus was designed by Chief J. R. Hopkins, of Somerville, Mass., a horse hose carriage and chemical engine, which went into service in that city October 12, 1884.

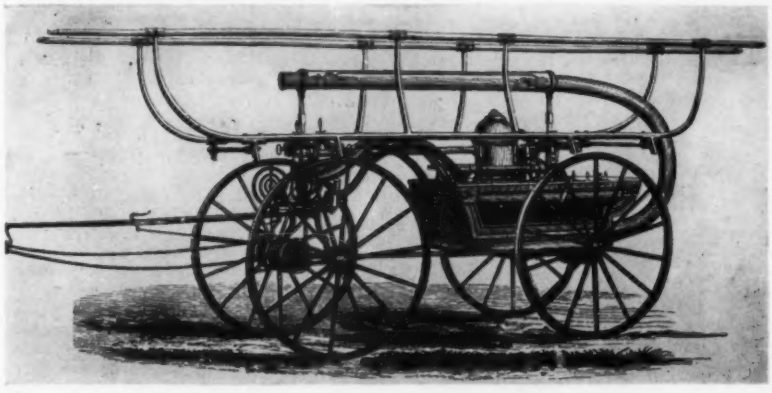
The first fire boat, made exclusively for fire purpose, was built in London in 1859, and was known as a "floating fire engine." It was not the first fire boat designed. In 1835, James Braithwait, who made the first steam fire engine in 1829, made plans for a fire boat, but none was constructed from his plans. In Germany, as far back as 1683, hand engines were placed on barges; also in London in 1793, but the London fire boat of 1859 was the first one with pumps operated by steam.



French Fire Engine of About 1829

Boston was the first in America to have a fire boat, the "Webb Flanders," which went into service January 1, 1873, two months after its great conflagration. It was originated by Chief John S. Damrell and was in service many years.

New York was next to have a fire boat, May 12, 1875. It was followed by Philadelphia in 1884; Brooklyn, N. Y., not then annexed to New York, in 1886; Cleveland and Chicago the same year; Buffalo in 1887; Milwaukee in 1889, and many others since then.



Crane Neck Style Fire Engine, with Folding Brakes

The first design for a water tower for fire purposes was made in 1857 by Aaron Roberts, a colored man of Philadelphia, but none was ever made from his plans.

New York had the first water tower in June 1879, made by Abner Greenleaf, of Baltimore. It was designed by John B. Logan, one of his employees. Boston received the second Greenleaf tower in March 1882. The Greenleaf tower was subsequently made by the Fire Extinguisher Company, of Chicago.

History of Hose

The first hose of which there is any record was made in Amsterdam, Holland, in 1672. It was constructed of leather. Hose was made about that time of sail cloth or seamless fabric. All hose was then sewed. It was not a success and unreliable. Very little was ever made. Successful hose came in 1811.

Hose Company No. 1, of Philadelphia, in 1811 appointed a committee of three to invent and have manufactured a successful hose. It accomplished its purpose. It was made of leather, iron riveted. Two members of that committee, A. L. Pennock and James Sellers, entered into a partnership to make it. In 1818 they had it patented. In 1822 Pennock & Sellers invented and constructed the first suction fire engine, the "Hydraulion" of Providence, R. I.

Fabric hose now universally used was first exhibited at a firemen's hand engine muster in Manchester, N. H. September 15, 1859. It was first riveted the same as leather hose. Until fabric hose came, no hose made would stand great water pressure and often burst in service. In tournaments leather hose was wound with marlin rope, or cord to increase its strength. Leather hose had to be often slushed with grease to preserve it, which made it disagreeable to handle and it ruined the clothes of many firemen.

The first hose used was two inches in diameter. It was not until large size suction hand engines came that it was increased to its present size of 2½ inches.

Different departments had hose couplings with different threads, which prevented their coupling hose to one another's apparatus. This practice was often desirable at large fires. One of the first acts of the International Association of Fire Engineers at its first convention in 1873 was to adopt a standard coupling with 7½ threads to the inch, now widely used.

The first vehicle to carry hose was a hand drawn hose wagon procured in 1812 by the Philadelphia Hose Co. No. 1. This wagon was similar to the horse hose wagon which came in 1881, but much smaller. This wagon had the first bell ever on a piece of fire apparatus. In 1814 the company had made for its use the first hand four wheel hose carriage or reel. Many were in service everywhere in later years.

(*To be continued*)

New Massachusetts Chiefs

Capt. Fred M. Ryder has been appointed Chief of the Middleboro, Mass., Fire Department, effective December 1. He succeeds Chief George R. Phillbrok, who retired. Chief Ryder has been a member of the department for thirty-eight years and Captain for thirty years.

Deputy Chief William W. Clark, has been appointed Chief of the Westfield, Mass., Fire Department. He succeeds Chief Thomas H. Mahoney who retired a short time ago.

HARRY BELKNAP.

Fall Fatal to Battalion Chief

Joseph P. Culligan, Battalion Chief, Rochester, N. Y., died at a local hospital on November 22 as a result of complications which set in following a leg and ankle fracture.

He and his driver were perched on a ladder, when the Chief, overcome by smoke, lost his grip and fell to the sidewalk. It seems he knew he was about to fall, and with all the strength he could muster, pushed himself away from the ladder.

As he lay on the sidewalk waiting for the ambulance, he repeatedly asked if he had cleared his driver on the ladder.

Chief Culligan observed his twenty-eighth anniversary in the department on July 1.

Firemen at Work in 1733. Taken from an Old Fire Certificate

I. A. F. C. Moves Ahead

Conclusion of Report on Association's Sixty-Fifth Annual Conference From Wednesday Afternoon's Session to End of the Meeting

A STAFF REPORT

FOLLOWING is the second and concluding installment of the staff report on the 65th annual conference of the International Association of Fire Chiefs, held at the Biltmore Hotel, Oklahoma City, Okla., on October 19 to 22. The preceding report appeared on pages 593 to 597, 605, 606 and 621, November issue.

WEDNESDAY AFTERNOON SESSIONS

Fire in Dow Metal Scrap

Chief John J. O'Boyle of St. Louis, Mo., described an interesting experience he had which involved some scrap containing a good portion of Dow metal. The result of the fire was that the department had nine men sent to the hospital seriously burned. The fire occurred in the south end of the building, on the first floor (concrete) near a freight elevator, in a pile of scrap material composed of copper, copper sulphide, empty wooden boxes, a number of empty paint containers, and about one hundred pounds of Dow metal scrap, an alloy composed chiefly of magnesium and aluminum. When hit by a stream, there were two minor explosions and then a third, with sufficient force to blow out a number of windows and burn nine firemen who were in the first company to arrive there, and some of them being burned very seriously.

Round Table Discussion

The first subject discussed at the Round Table was "Should Emergency (Rescue) Trucks Be Under Control of the Police Department or the Fire Department?" Chief Steinkellner expressed the belief that both police and fire departments are organized for saving life and property and both should participate in rescue work. He pointed out that the police have cruising cars, and in many cases are in a position to give quicker aid.

"I do not mean that we should agree that all rescue work should be taken over by the police department," said Chief Steinkellner, "for the fire departments are equipped for many different operations in rescue work, but I do believe that in the case where oxygen is needed for a new-born baby, if the police department in their cruising cars were equipped with inhalators, they could give quicker service than the fire department."

Chief O'Boyle expressed a like opinion that both departments should participate in the work.

Chief Francis E. O'Boyle of Middletown, N. Y., stated that the fire department is on hand when an emergency arises in a greater percentage of cases than the police department, and for that reason should have charge of rescue work. Chief Luther P. Willis and Chief Hugo R. Delfs each felt that the rescue truck should be under control of the fire department.

Chief R. E. Mottesheard stated that in Dearborn the police and fire departments cooperate very closely. "It has been my experience," said Chief Mottesheard, "that where there is any dirty or heavy work to be done, the police have their clean uniforms on, and they hesitate about going in and doing it."

Chief Knight felt that the work was the task of both the police and firemen to do, but the firemen are better trained than the police department.

Commissioner Charles B. Keenan, of Newark, outlined the cooperation of the police and the fire department in his city. Both police and firemen are trained in the Fire and Police Training Academy and each receives the essentials of first aid work.

At the I.A.F.C. Convention

Left to right. TOP—C. E. Wood, Chester, Pa., rep. Ahrens-Fox; Chief J. J. Kelly, Scranton, Pa.; Asst. Chief J. T. Coughlin, Greensboro, Pa. CENTER—Chiefs I. A. Bloom of Red Bank, N. J., Ben R. White, Pampa, Tex., and E. J. Mellin, Jermyn, Pa. BOTTOM—Chiefs Wm. J. Lutz, Wilmington, Del., Michael E. Clark, Williamsport, Pa., and E. J. Shoemaker, Lancaster, Pennsylvania.

Are We Yet Ready for the Three Platoon System?

The discussion on this topic was opened by Chief Charles L. McCarthy, of Worcester, Mass. He believed that the men themselves would not be satisfied with three platoon systems at this time.

Chief Daniel B. Tierney of Arlington, Mass., felt that the three-platoon system should not be pushed until the firemen and officers are brought up to a higher standard of pay. "I would like to see the wages of firemen," said Chief Tierney, "first reach $50 a week. In New York they have the three platoon system, but don't forget the privates had $3,000 a year before the three platoon was adopted."

Chief Mottesheard briefly described the experience in a neighboring city where the three platoon system is in vogue. The men are not satisfied with it, and the majority would prefer their old arrangement of days off.

Chief Edward G. Shoemaker of Lancaster, Pa., described the legislation recently enacted in Pennsylvania, whereunder the men must be given an extra day off where they work on the two platoon system. Many of the men do not wish the three shifts, or eight hour platoon, for they will be getting two days off every week under the present arrangement.

Chief Foster, who is in charge of the fire department of Norfolk Navy Yards at Portsmouth, Va., pointed out that his department has three platoons, but he would not recommend it elsewhere unless the men first got a living wage. "I think we should endorse a movement to increase the wage of the men up to a living standard," said Chief Foster, "and we should not criticize one department that is fortunate enough to have shorter hours for the working men, because every mechanic now receives far more than the firemen and is doing work of far less hazardous nature."

George Richardson, Secretary-Treasurer of the International Association of Fire Fighters, was granted the privilege of the floor to talk on the question of three platoons. Mr. Richardson said that his Association "was going to endeavor to aid the men in cities to get three-platoon systems, but rest assured the men are not going to ask for the three platoon system until they are satisfied they are getting a living wage."

Round Table on Wednesday

"Should children be permitted in motion picture theatres unaccompanied by parent or adult guardian?" This topic was introduced because of a develop-

ment in New York City which permits an adult to take care of a group of children, and because of the fear that if this plan expands, a serious life hazard may result in case of fire.

Chief Brennan said that in San Francisco there was no age limit, and a child could go to the theatre alone. No bad results followed.

Specifications for Apparatus

Considerable discussion followed on the topic, "How far should a fire department go in preparing specifications for fire apparatus?" In general, there was a belief that since the fire department was by experience best qualified to state what was needed in the way of fire apparatus, it should not be told by other city officials, just what to buy. However, it was felt that the question of motor design and other specialized subjects should be left to the manufacturer.

Chief Selden R. Allen, Brookline, said he believed that the department should purchase everything used by that department.

Chief J. Ray Pence, of Stillwater, Okla., told of a small department that had special apparatus designed for its local needs, and that he believed those qualified in the large city departments should help the smaller department in working out such problems.

A warning was issued by Chief W. H. Palmer of Charlotte, N. C., that unless departments take an active part, they will soon find that specifications for their apparatus and equipment will be written by agencies remote from the service. He told of a move by the U. S. Conference of Mayors to standardize specifications of fire apparatus.

A suggestion was advanced by Chief R. E. Mottesheard, Dearborn, Mich., that chiefs write their experience with specifications, assembled apparatus, etc., to the association headquarters. Then, if any member should get into trouble, he would have the facts and experiences of other Chiefs to back him up should he wish to prove a point with his city officials.

Many participated in this discussion.

Control of Air Conditioning

The next topic was on "What progress is being made toward preventing hazardous air conditioning installations?" George W. Booth, Chief Engineer, National Board of Fire Underwriters, who was called upon, told of booklets that were being distributed free by the Board which presents the latest information on the subject. One deals with home installations, and one with industrial equipment.

Metal Aerial Ladders

A great deal of interest was created in the topics, "What has been your experience with metal aerial ladders, particularly during the past winter?" and "What has been your experience with power operated aerial ladders during the past year?"

Chief Brosnan, of Albany, Ga., said that he wouldn't think of having a wooden aerial ladder in his department. They have duraluminum ladders.

In the event of contact made by the metal ladders with overhead electrical wires, the truck is insulated from the ground by means of the rubber tires, and by means of wooden blocks placed under the jacks. He said that they also use the metal aerial ladder as a water tower and stick the end right up close to the fire. With a wooden ladder, one hesitates to get that close.

When the question of metal strength at various temperatures came up, the chair called on manufacturers to present their experiences.

Lester Stevenson, Sales Manager, The Seagrave Corporation, told of tests made on ladders loaded with 2,000 pounds of sand bags during the winter time. Tests were made both at the factory and at Ohio State University, in the presence of professors of the Department of Engineering. With 1,600 pounds, evenly distributed, there were about three inches deflection. He said that there would not be any more harm in freezing a metal ladder than one of wood.

At the I.A.F.C. Convention

Left to right. TOP—front, Bob Simmons, Tenn. Rep. American-LaFrance. Chief J. R. Pyle, Kingsport, Tenn., and Harry Devine, Bi-Lateral F. H. Co., Chicago; rear, Chief R. S. Baughan, Norfolk, Va., Chief Calvin Johnson, Knoxville, Tenn., Chief J. A. Fischer, Annapolis, Md., and Asst. Chief Jack Raffo, Richmond, Va. CENTER —Chiefs E. A. Brumley, Greeley, Col., Vern Campbell, Longmont, Col., L. P. Willis, Pueblo, Col., E. A. Johnson, Boulder, Col., and Fred A. Taylor, Colorado Springs, Col. BOTTOM—Front, Chiefs M. J. Shea, Fitchburg, Mass., and Wm. H. Hill, Belmont, Mass.; back, Chiefs Geo. Johnson, Waltham, Mass., R. M. Tappen, Gardner, Mass., C. L. McCarthy, Worcester, Mass., and J. W. Randlette, Richmond, Me.

A number of questions were presented to Henry Landscow of Peter Pirsch & Sons Company, Kenosha, Wis. He said that mild steel and aluminum do not lose very much of their strength in cold weather, and the latter metal was at its maximum strength at 70 degrees Fahrenheit, although there were not apparent deviations in strength at temperatures not too far above or below that point. Temperatures around 900 to 1,200 degrees Fahrenheit would have to be reached before there were effects on aluminum ladders.

Metal, being a conductor of heat, would dissipate the heat from some particular point. Heat that would scorch or burn a wooden ladder would be dissipated by a metal ladder. He said that a metal aerial ladder, if extended, and subjected to temperatures of 1,000 degrees, would not buckle or bind. He said he would have no hesitancy in having a ladder used as a water tower, extended into a burning building.

On the question of short circuit with overhead wires, Mr. Landscow said that there would be no hazard to the men on the ladder as the ladder was insulated from the ground, but that a man leaning against the truck would receive a shock.

To a question regarding the crystallization of the metal, he said that it would not crystalize in a period of ten or fifteen years.

Chief O. J. Parker, Atlanta, Ga., said that he believes the time is coming when metal ladders will be used exclusively.

Mr. Landscow said that a metal ladder of the same weight as a wooden ladder would be twice as strong or that a metal ladder weighing half the weight of a wooden ladder, would be just as strong.

Chief Brosnan of Albany, Ga., said that he was never more sold on any piece of equipment than he was on the hydraulically operated cable with the metal ladder. One man can do all the operating.

Experience with Power Raised Ladders

Edward Rumsey, Chief of Apparatus, Detroit, Mich., told of his experiences with the hydraulically operated aerial ladders. It is easier to raise such ladders, and the ladder can be pointed at some window and then extended to it, instead of raising the ladder vertically and then inclining it to the desired point. The tillerman is seated on the ladder with this model, while with the old type, he sat above it.

Mr. Stevenson said that the overhang on a three-piece aerial ladder was determined by the overall length of the longest ground ladder required, and not by the aerial ladder itself.

Charles H. Fox, President of the Ahrens-Fox Fire Engine Company, Cincinnati, Ohio, also discussed the question of overall length of aerial ladder trucks and the effect thereon of the length of ground ladders specified by fire departments to be carried thereon.

"Hypothetically, if you had a 55-foot

ladder," said Mr. Fox, "the chances are that the 55-foot ladder, under the new set-up we are all coming to, will probably be very much longer than your aerial will be. You will have to be consistent. If you want to profit by what shorter overall of the apparatus, you have to make up your mind to be content with an extension ladder that won't extend beyond that."

The last topic discussed at this session was, "When and how should fire department ladders be tested? When should they be condemned?"

Chief Steinkellner of Milwaukee said that he leaves it to his Master Mechanic to pull in any piece of apparatus or any ladder for a test, and he can also order it out of service.

Testing Ladders in Detroit

Chief Rumsey of Detroit said that while they have no regular time for testing ladders, inside of a three-year period every ladder is tested. In testing the ladder, ropes are fastened to every third or fifth rung. The ladder is then raised at the proper angle and all ropes lead to the ground to be held by firemen. At the command, the firemen put their weight on the ladder. A fireman climbs the ladder about ten feet and shakes the ladder under that loading. In testing, one man is used for every ten feet of ladder, regardless of the size of the ladder.

At San Francisco, weights are hung from the ladder, totalling about 1,600 pounds. The angle of the ladder is fixed at 65 degrees. Under such conditions, the deflection must not be more than three inches.

It was suggested that ladders be varnished instead of painted so that any cracks in the wood may be evident.

State Fire Department Training Schools

The first topic of the Thursday morning session was devoted to state fire department schools. Chief J. Ray Pence, of Stillwater, Oklahoma, who handled this subject, reviewed the growth of state fire schools and emphasized the great influence they have had on improvement of the fire service. He called attention to the fact that the transition in training the personnel has been gradual but continuous.

"The fact that we used to train the horses," said Chief Pence, "and today we train the men has had a direct effect on us and our work. We have passed from obedience to experiment and we are now going through the experimental stage.

"We grow jittery constantly waiting for Hell to pop loose in that expected conflagration. In thousands of cities and towns groups of firemen, such as you and I, gather around the conference table analyzing our job so that the State Fire Schools may make available to us in class material that will overcome this jittery feeling, so that we may be more capable and efficient in handling any conflagration that we might be so unfortunate as to have in our own community.

"We can improve the quality of our departments and we can improve the quality of our men, but can this improvement be brought about without education? Not many years ago Fire Chiefs and firemen were looked up to as wonder men. Where are they today? The Chiefs and firemen of today are much farther advanced in their profession, due to education. In thinking of the Chiefs and firemen of tomorrow, we ask ourselves this question: what could they do without proper training? Tomorrow we look to the State Fire Schools and the colleges for our training leadership."

THE NEW BIG CHIEF OF THE I.A.F.C.
DR. TIERNEY ARLINGTON, MASS.
NET PROFITS INTEREST ME.
CAP MOELLER LISTENS
COMMISSIONER KEENAN OF NEWARK, N.J. TELLING A BED TIME STORY TO CHIEF BURNS OF BRIDGEPORT CONN.
CHIEF ANDY CALLAHAN THE NEWMAN THOMPSON OF HARRISON, N.J.
ANOTHER REAL CHIEF - FRANK BOSIN ANADARKO, OKLA.
THE GREAT WHITE DAD OF THE I.A.F.C.
GEO. KELLOGG OF SIOUX CITY, IA.
DOC PRICE
DR. ARCHER
TWO MORE GOOD BRAVES
"LONG GEORGE" MORLEY FROM MANHATTAN ISLAND
JUST A FEW WILD INDIANS AT 1937 CONVENTION
OKLAHOMA CITY
CHIEF ROSCOE FOSTER, NAVY YARD - PORTSMOUTH, VA.
As sketched on the scene by Hal Eggert '37

Preparing for War Emergencies

In a paper read by Chief and Fire Commissioner John J. McElligott, New York City, and prepared jointly by himself and I. H. Chase, Vice President and General Manager, FIRE ENGINEERING, the Commissioner reviewed military preparations being made both in Europe and the Orient, and pointed out the danger of this country becoming involved if war is declared abroad.

The increasing range of planes, and the development of larger and more destructive bombs increase the hazard of conflagration in cities heretofore commonly believed to be out of reach of enemy bombers.

The necessity of taking precautionary measures, of developing means for combatting air raids and preventing spread of fire therefrom were discussed fully in this paper, which was published in full on pages 590 to 592, November issue.

A committee is to be appointed by the President of the Association to study the matter of effective protection against air raids, particularly from the standpoint of fire, and this committee will make a study of the matter and contact the War Department as well as other Federal agencies in an endeavor to formulate a plan for effective cooperation.

Chief George Kellogg Honored

Chief George Kellogg of Sioux City, Iowa, was given the singular honor of being made President Emeritus of the International Association of Fire Chiefs. In reviewing the history of Chief Kellogg in the fire service, Chief John

Men Who Were Pretty Much in the Picture at the Oklahoma City Convention

Left to right. LEFT—Joe Ringers, Sales Mgr., Fabric Fire Hose Co., Sandy Hook, Conn.; Chief L. F. McDonald, Jackson, Miss.; Chief G. T. Haskins, Greenwood, Miss.; A. C. Hopper, Dallas Mgr. Fabric Fire Hose Co., and Chief W. J. Springer, Texarkana, Ark. CENTER—The three famous musketters have a reunion—Clarence Stewart and Bob Hazzard, of American-LaFrance Co., and George Morley, I.A.F.C., Sergeant-at-Arms. RIGHT —A few of the Seagrave family—Lester Stevenson, Sales Mgr., Columbus, O., Art Wilson, Atlanta, Geo. Ackley, Dallas, Lewis Lehr, Chicago, C. R. Raynes, Dallas, and Chas. Slemp, Oklahoma City.

Healy, Denver, called attention to the fact that Chief Kellogg became a member of the Association in 1874, one year after its inception. Chief Kellogg was President of the Association in 1907, thirty years ago.

Joint Occupancy of Department Buildings

The first Round Table topic on the Thursday forenoon session was devoted to a discussion on the feasibility and desirability of erecting large structures on fire station sites in high value districts, the fire company to occupy the ground floor and other municipal officers the other floors.

In discussing this subject, Chief Charles J. Brennan, of San Francisco, stated that one of his principal fire stations is located in a building erected by Hale Brothers Department store. This building is ten stories in height. The first floor, and half of the basement, is for the fire department apparatus and the second floor for a dormitory for the men of the department. "It has worked out very successfully," said Chief Brennan. "The contract was that the building was to become the property of the city in 20 years. We have three years to go. It is not only an excellent idea, but in my opinion, a very profitable one. There are other factors, too, which must be considered. You can locate your company in a very advantageous position which you might not be able to do if you were purchasing property in the neighborhood where you desired to establish it."

Warning Signals on Apparatus

Leading off the discussion on the topic "What Warning Signals Do You Consider Necessary and Desirable on Fire Apparatus?" Chief Pence, of Stillwater, Oklahoma, told of the troubles his department was having with motor traffic due to the modern design of closed bodies. These bodies, well insulated against weather, are also fairly well sound insulated. Riders in these cars frequently do not hear the fire apparatus siren. "I was wondering," said Chief Pence, "whether something could be developed that would seriously interfere with the radio on the car. You could put private car radios out of service by having a spark-gap on your apparatus, at a high frequency. We have had several near accidents due to people in the car not hearing our sirens, not seeing the red lights. They have had their minds on something other than a piece of fire apparatus, mostly due to their radio being in operation. so that they couldn't hear the apparatus."

Chief M. T. Kennedy, of West Orange suggested that the police court would be an effective antidote for this trouble.

In answer to a question by Chief H. G. Lindgren of McPherson, Kansas, as to how to solve the problem of transports and trucks displaying a red warning light similar to fire department lights, Chief Mottesheard told of an ordinance passed in his city prohibiting the use of any signals on other than emergency trucks that interfered with those of the police and fire department.

New Designs of Apparatus and Equipment

Captain Edward Lamb, of San Francisco, opening the discussion of the topic "What Is Needed Today in the Way of New Designs of Apparatus and Equipment in the Fire Service?" described

Two Generations of the Famous Joyner Family

Attending the Oklahoma City Convention were R. W. (Dick) Joyner, Mgr., Eureka Fire Hose, Dallas office, with his son, R. G. (Dick, Jr.), who is on his dad's sales staff. They are son and grandson of W .R. Joyner, who had the distinction of serving as I. A. F. C. President in 1887 and again in 1903 and 1904, while Chief of the Atlanta, Ga., Fire Dept.

the work which had been done in the San Francisco Department on the use of air compressors for cleaning the smoke out of basements of buildings. By the equipment employed, 140 cubic feet of air compressed at 100 pounds pressure forces out between 3,000 and 3,500 cubic feet of heated air from a basement in one minute's time. The air compressor is also used for forcible entry work as well as for rescue work.

Edward Rumsey, Chief of Apparatus of Detroit, also discussed this subject. "First of all on the list would be closed bodies," said Chief Rumsey, "for the protection of men in responding to and from alarms. Secondly, I believe centrifugal pumps, direct connected to multi-cylinder engines, is desirable, and I believe it will simplify the operation of the engines if such types are built. Thirdly, shorter wheel bases for ladder trucks as well as engines.

"Another thing that should be taken into consideration is the overall width of the apparatus. As we know, in heavy traffic, if you have wide jobs, it is very hard to get them through the streets; I am particularly speaking of balloon tired engines or ladder trucks. We know that it is desirable from the standpoint of tire capacities, but with the traffic conditions in narrow streets, the department is certainly handicapped."

Experience with Fog Nozzles

The Round Table topic, "What Experience Have You Had with Fog Nozzles? What Results Were Secured?" brought forth extensive discussion. Chief R. W. Granger, of Tulsa, stated that the fog nozzle was not a cure-all for the ills of the fire department, but if used in most places for which they are designed, they are very good. Chief W. P. Cooper of Richmond, California, had similar experience with these nozzles. The fog nozzle, he believes, has its place, particularly on small oil fires, but with very large oil fires it is still in the experimental stage.

Chief M. T. Kennedy of West Orange, N. J., described the experience at Newark, N. J., where fire in the oil switch, which had been burning several hours, was finally extinguished by a fog nozzle.

Chief John J. McElligott of New York City felt that the best use for the fog nozzle would be in connection with chimney fires where very little water damage would be done. In answer to a question as to whether permanent installation of fog nozzles, placed over oil tanks would serve in extinguishing a fire, Chief Goff answered as follows: "Vapor will extinguish an oil fire. It will do that if properly applied, breaking the water up into a fine spray. I have made up my mind that I don't want to depend on it altogether as yet for the reason that I don't know whether there has been a nozzle perfected that will not corrode or give any other kind of trouble. The fog nozzle has merit. I believe the nozzle is here to extinguish other fires than oil. We will be using it on the inside of structures in a short while, I believe. It is very effective on shingle roof fires and is good for inside work, for you can cover a very large area with it. Apparently the fog absorbs a great deal more heat than a solid stream, and it does not result in as heavy water damage.

Chief Lindgren, of McPherson, Kansas, Chief Brumley, Greeley, Col., Chief Brennan of Pelham Manor, and

others reported satisfactory results with the use of fog nozzles on various types of small oil fires.

Fire Prevention Factors in Building Construction

The discussion of this Round Table topic was started by Chief M. T. Kennedy, who expressed the belief that where a modern building code is employed, buildings near to 100 per cent fire-resisting as possible result.

At Salt Lake City, according to Chief W. S. Knight, a committee of six members, of which the Chief of the Fire Department is one, devised a building code which is now in force. Enforcement of the building code is in the hands of the building inspector.

must be submitted to the fire department for checking.

It provides that if the Fire Chief enters any objection to any of the arrangements of the building, he must be heard before a board. This board is made up of the superintendents of the building department, the health commissioner, the Chief of the fire department and two competent builders or engineers.

Leakage of Gasoline from Underground Tanks

Chief A. H. Seay, of Miami, Oklahoma, described an incident where a gasoline tank had been buried for some years, and the use of the tank had been discontinued, but the tanks were not removed. Heavy rains caused water to

OTTO VEIT ~ BRAXMAR'S SACHEM ~ LESS HEAD DRESS, WAS HIS FACE RED ?
CHIEF GEO. FLETCHER ROCHESTER, N.Y.
GENIAL TOM CAVANAUGH CHIEF WATERBURY, CONN.
MARTY'S HOLDIN' 'EM!
← Green for McGinley
APPLE KNOCKER!
SOME OF THE JOYSEY RED SHOITS LOOKING FOR MIKE MURPHY

Drawing by Art Espey

Chief Brosnan pointed out that the adoption of a building code is a splendid move, but in many instances the Fire Chief will find that he has to back up the building code and see that the building department enforces it. "Politics creep in," said Chief Brosnan. "Special permits are given. Unless you are right on the job to see that the code is enforced, you will find in a lot of your cities that there is a fine building code, but lacking enforcement. If the code is not enforced it is worth nothing at all."

Chief Mottesheard said the building code of his city was written in 1933-1934. Architects and engineers were called in to cooperate in the preparation of the code, which is considered to be a splendid one. The code provides that plans for all buildings, other than single residence and four-family flats,

enter the tanks through rusted holes and the oil remaining therein overflowed and found its way to a guttter of one of the business streets. Someone tossed a lighted match in the gutter, and the gasoline took fire, nearly destroying several cars.

Chief Delfs, of Lansing, told of the leakage of gasoline from buried tanks across the street into the basement of an automobile sales room. The gasoline reached the elevator pit and before the inflow was discovered, the gasoline in the pit had reached a depth of approximately six inches.

Chief McElligott, of New York, described an experience in New York City where the engineer of a large factory building discovered a blue flame coming up through the ash pit of a boiler. He sent in a fire alarm. The firemen arrived and while they were going down the stairs, an explosion occurred killing two men and badly burning the rest of the outfit.

The Fire Department dug a hole in the boiler room floor about four feet deep and took out sixteen fifty-gallon drums of gasoline. In the check-up of the source, the department tested all the underground tanks in a certain area and found one in a bus terminal that was leaking and had been leaking for years. The terminal officials noticed the loss of gasoline but didn't know where it was going. This plant was about twenty-four blocks away.

"Every time a permit is issued annually," said Chief McElligott, "we test the tanks, under ten pounds of pressure, and hold it for thirty minutes. In that way we found several leaky tanks. We have tested all tanks that have been buried over 15 years and have found several which were defective.

"The question was raised as to whether we should do away with underground storage. That would be impracticable in New York City, for there would be gasoline tanks on every block, and maybe several on a block.

"A tank has been developed, called the double-jacketed tank. Between the jackets there is an oil pressure, also a gauge, which indicates any loss of pressure in that jacket. Drop in pressure on this gauge would immediately indicate that there was a leak either in the outer or inner jacket. I believe this is the solution to the problem."

Chief Bender, of Saginaw, Michigan, pointed out that in addition to mechanical failure of tanks there is also the element of human failure. He described an incident which happened in his city, where about dusk one Sunday evening a strong odor of gasoline was detected in the basements of several homes in a neighborhood. Careful check-up indicated that the gasoline had its origin at a gasoline service station. Further investigation disclosed the fact that a station attendant on duty the night before had turned on the gasoline pump and had gone home and had forgotten about it. Approximately 10,000 gallons of gasoline had overflowed, seeping into the ground and entering the main sewer.

Chief Brosnan, of Albany, Ga., will not permit the installation of tanks without a permit. Albany does not allow underground storage tanks of any large capacity to be placed on hillsides or in any neighborhood where there are cellars adjacent. These tanks are, however, permitted to be placed inside of concrete pits as a further safeguard against leakage.

Uniform Marking of Fire Hydrants

The question of marking hydrants so as to indicate their capacity was discussed at length. The suggested method of marking hydrants is as follows:

All barrels to be chrome yellow except in cases where another color is desired.

Class A hydrants—tops and nozzle caps—to be painted green.

Class B hydrants—tops and nozzle caps—to be painted orange.

Class C hydrants—tops and nozzle caps—to be painted red.

Although this marking has been adopted by the American Water Works Association, New England Water Works Association and New England Associa-

tion of Fire Chiefs, no action was taken toward that end at the Convention.

Inspection Work by Volunteers

The first topic on Thursday afternoon program was entitled "Can a Volunteer Department do Effective Inspection Work?" and was presented by Chief M. F. Gunderson of Oelwein, Iowa.

Chief Gunderson explained in detail how members of his volunteer department performed inspection work after hours. These men are engaged in various occupations during the day, but willingly give their time at night to perform inspection service. Permission is asked of the property owner for the inspection to be made, and frequently the property owner will open up his establishment after hours to permit the firemen to go through and check up on the establishment.

The results have been very satisfactory, according to Chief Gunderson.

Films of Transformer Fire Test

Through the courtesy of the Public Service Company, of New Jersey, two reels of colored motion picture films illustrating tests in extinguishing fires in large oil cooled transformers were shown.

These tests were conducted by the Public Service, subsequent to the fire in the powerhouse in Newark early this year. Fog nozzles were employed in all of the tests, and proved to be quite effective, even in the hands of power plant employees, in extinguishing the various blazes.

The Associated voted unanimously to extend its thanks to the Public Service Company for making the films available to the Association.

First Aid Work

Dr. Harry M. Archer, Honorary (but mighty active) Surgeon of the New York Fire Department, and Honorary Deputy Chief of that Department, gave a splendid talk on first aid work in the fire service. Dr. Archer's long service in the New York Fire Department has fitted him especially to discuss the subject with authority. And, talking in the language of the fire service, he delivered a lecture which was understood and appreciated by all.

Starting with minor injuries, he followed out the work of the Fire Department surgeon through the various branches up to the more complicated injuries.

So instructive and interesting was his talk, that, by unanimous vote, the Association ordered its immediate publication and distribution to the entire membership of the Association.

Exhibitors' Session

After the talk by Dr. Archer, the various exhibitors were given an opportunity of describing briefly their exhibits and their products.

Election of Officers

The Friday morning session was, as usual, well taken up with election of officers, and selection of next year's Convention City.

Chief Daniel B. Tierney of Arlington, Mass., was advanced from First Vice-President to the Presidency; Chief Roy E. Mottesheard, Second Vice-President, was advanced to First Vice-President; Chief Ray Tiller, of Waterloo, Iowa, was unanimously elected Second Vice-President.

Ex-Chief James J. Mulcahey of Yonkers, N. Y., was unanimously re-elected Recording Secretary-Treasurer, and Jay W. Stevens, State Fire Marshal, San Francisco, California, was re-appointed Executive Secretary.

The first act of the new President, Chief Tierney, was to present to the retiring President, Chief Bogan, a diamond studded President's badge, the gift of the Association to the retiring President.

Next year's Convention goes to New Orleans, Louisiana. Spokane, Washington, made a bid for the Convention, but withdrew it shortly after voting started, and Chief Payne, representing that city, made a motion that the selection of New Orleans be made unanimous. He also expressed the hope that the Convention would come to Spokane in 1940.

Memorial Service Setting in Theatre of Municipal Auditorium at Oklahoma City, Okla.

The services at this year's meeting of the International Association of Fire Chiefs were the most impressive ever held.

Nichols, Conn., Plans Station

Trustees of the fire district at Nichols, Conn., a suburb north of Bridgeport, have been authorized to apply for a WPA grant to assist in the construction of a new fire station. It is expected that the new structure will cost $18,000, will be built of brick, and will have a three-door entrance. It will be erected on the site of the present house and will be 45 x 45 feet, according to present figures.

The trustees were also authorized to purchase a new piece of fire apparatus, a 500-gallon pumper equipped with a 300-gallon booster tank, with hose and other necessary equipment.

THOMAS F. MAGNER.

AN' YOU LEFT THE OKLY-BILTMORE WITHOUT PAYIN' THE BILL?
WELL? WHERE WAS HIS WIFE, THEN?
YOUR HONOUR! HERE IS THE CULPRIT!
GUILTY AS CHARGED, EH! BOYS? OFF THE TRAIN AT BUFFALO!
LIFE ON THE EASTERN REGULARS TRAIN HAD ITS TRIALS! (I.A.F.C. Conv.)
JUDGE HAZARD
DIST. ATTORNEY JOE SULLIVAN
THE OFFENDER → C.D. STEWART

Life on the Eastern Regulars' Train Had Its Trials

Enroute to New York from the Convention of the International Association of Fire Chiefs at Oklahoma City, members of the Eastern Regulars on their special train participated in a trial of one of the members, Clarence E. Stewart. It seems there was a little question about paying a bill, at least his own hotel room bill, by the defendant. Despite vigorous defense on the part of the jury and the attorney for the defense, the "Judge", Bob Hazzard, and "District Attorney", Joe Sullivan, found the prisoner guilty.

Chief Olander Lind Being Interviewed by Virginia Wallace, Women's Commentator for Station KCKN

"WE'RE ON THE AIR"

Kansas City, Kan., Fire Department Arranges Novel Radio Programs to Carry Its Message During Fire Pevention Week

THOUSANDS of homes in Kansas City, Kan., through the medium of the radio, were informed of the good work of the local Fire Department, and were shown what happens when a fire alarm is received.

It was all the result of the wonderful cooperation that exists between the department and Station KXKN, owned by the newspaper, *The Kansan*, and managed by Ellis Atteberry, who has always been interested in Fire Department matters.

Station Staff Cooperate

When the department decided that it would be best in the interest of fire prevention work, to carry its message into the homes by means of the radio, it presented its case to Mr. Atteberry, who immediately made the station staff available. He assigned three announcers, two technical engineers, a stenographer, and two continuity experts to work on a program for the Fire Department.

Chief Lind Interviewed

Two weeks prior to Fire Prevention Week, remote control was established between the office of Chief Olander Lind and the radio station. He was interviewed by one of the station's newscasters regarding a fire play contest. This interview lasted fifteen minutes. The interview, together with the announcement of a cash prize and the honor for the winner of having his play broadcast, brought a very heavy response. Of course, the play had to be about some particular fire hazard. After the winning plays were selected by three prominent local persons who served as judges, a play was broadcast each night during the week. The actors were members of the Junior College Players under the direction of Lucy Dougherty, Director of Dramatic Arts at the college.

Public Hear Fire Alarms

In addition to the plays, the department went on the air on Monday, October 4, when microphones placed near the fire alarm board made it possible to hear what went on when alarms were received and retransmitted. During this fifteen-minute program, the listeners heard an excited woman call, state that there was a fire, and then hang up without giving directions. This was intended to show one of the greatest problems of the fire alarm headquarters. The public was told how to telephone alarms properly.

At a joint luncheon of all the civic clubs in the city and the Chamber of Commerce on Wednesday, J. Burr Taylor, of the Western Actuarial Bureau, Chicago, participated in the program. His talk was broadcast, and after he had spoken for about twenty minutes, he announced that he was going to demonstrate just how efficient the department really was. He made a telephone call and then the diners heard:

Demonstration of Run

"Good afternoon, ladies and gentlemen. This is Owen Balch, of the staff of KCKN, speaking to you direct from fire headquarters where, in just a moment, we will demonstrate to you an exact fire alarm and run."

During this brief announcement, Mr. Taylor had rushed down stairs to a waiting Chief's car.

Now back to the announcer.

"Just as soon as an alarm is received, it will be broadcast through a microphone set alongside the fire alarm transmitter. Here it is."

A fire alarm operator says, "Fire Department," and a woman's voice at the other end of the end of the line reports a fire at Eighth and Armstrong.

At this point, Mr. Balch, one of the announcers, described how the apparatus was leaving the station, and how the apparatus was turning the first corner. The listeners could hear the roar of the fire apparatus and the sirens. The conversation was picked up at another point:

Broadcast from Field

"Good afternoon, ladies and gentlemen, this is Ralph Nelson speaking to you from Eighth and Armstrong, over a portable street microphone set up by KCN. Here comes the Chief's car around Eighth and Minnesota Avenue, immediately followed by a pumper company and a ladder company. Here is the Chief getting out of his car."

The diners hear the Assistant Chief ask, "Where is the fire?" only to be told by the announcer that there is no fire and that he was just testing the speed of the Fire Department in answering a call. From the time the call was received until the 3,000-foot run was completed, was but forty seconds.

Mr. Nelson introduced Mr. Taylor and he finished his talk to those at the luncheon by means of the portable microphone.

At the radio station, Mr. Atteberry had an electrical transcription made of the run and the last part of Mr. Taylor's talk. That evening a number were invited to the radio station, and there heard the screaming sirens. At first the visitors looked around for the approach of fire apparatus, but soon realized that the sound was coming from the radio. Mr. Taylor had the unique experience of hearing himself talk.

On Saturday night, the eight winners of the play contest appeared at the radio station to be presented with five-dollar checks. This was broadcast, and brought to a close a most active Fire Prevention Week program.

In addition to the radio programs, Chief Lind had seven teams, of four firemen each, visit every school—seventy-one in all. There they gave fire prevention talks to the children. Speakers were also sent to several of the larger manufacturing plants where thirty minutes had been set aside to discuss the question, "How can we keep our plant from burning?"

Chief Lind and his associates feel rather proud over their unique program and for the steps taken to acquaint the public with the department and fire prevention methods.

Has Truck But No Men

Grand Rapids, Mich., has a new 85-foot aerial ladder, but officially it has not been placed in service. There are no men to man it.

Last June, there was a civil service examination for firemen, and to date the Civil Service Examiner has not completed the grading of the papers. As soon as that is done, ten new men will be appointed and the equipment will be placed in service.

PROMOTIONAL STUDY COURSE

Herein is presented a series of definitions, questions and answers designed to aid fire department officers in preparing themselves for promotional examinations. In this department, which appears monthly, will be included questions typical of examinations held throughout the country.

Definitions

Carbon Monoxide: A poisonous gas ever present during a fire where incomplete combustion is evidenced. It is present in smoke. Carbon monoxide has a toxic action.

Carboy: A large glass bottle, or demijohn, enclosed in a wooden crate and generally packed with straw to prevent breakage. Usually used for corrosive acids.

Coefficient (or a constant) of friction, safety or strength, etc., may usually be taken to be a number which shows the proportion (or rather ratio) which friction, safety, tensile strength, etc., bear to a certain something else which is not generally expressed at the time, but which is well understood.

Column: Sometimes called a post. A pillar, built up of steel members or other appropriate material.

Common Hazard: A term which denotes such features as carelessness, unsafe chimneys, ashes in wood receptacles and the hazards of light, heat and power, as found in all risks.

Questions

(To be answered in next issue)

1. Fire occurs in a one story and basement ordinary brick building. The basement is occupied jointly; the first floor is divided by two-inch asbestos block partitions into four stores, occupied as a motorcycle garage and repair shop; battery service station, repairing and charging storage batteries; a rubber tire repair shop, and a lunch room. Each store has a wire glass skylight above.

   Exposures to the south are blank walls to a fireproof building; to the north a blank wall to a four story building; to the west unprotected window openings on three story dwelling across a 20 foot street. You are called to a fire in this building at 10 o'clock at night and find the cellar heavily charged with smoke; you have a regular first alarm response for a district of this kind and ample water is available. How would you proceed to extinguish it?
2. Which do you consider the most dangerous; a steel trussed roof, or one of timber construction. Explain why?

False and True Questions

(Is each question false or true? Answers in next issue)

3. T F—Anyone who can carry the pump tank type of extinguisher can get an equally good stream from same.
4. T F—Before opening up a wall with a battering ram a line should be ready and at hand.
5. T F—In operating on a fire within a building, streams should not be so directed as to strike the ceiling.
6. T F—Hand grenades in the form of bottles containing extinguishing mediums are recognized as efficient extinguishers.
7. T F—Members of the department should always call the attention of officers of the department to anything of a suspicious nature they might see at a fire.
8. T F—The quantity of material in a burning building must be considered in trying to determine the likelihood of exposure fires occurring.
9. T F—Thorough ventilation will protect coal piles against spontaneous ignition.
10. T F—Means of egress, accessibility to the Fire Department, construction and contents of building and possibility of confining fires to part or all of the structure are slightly important details hardly worth being noted by men inspecting in the district.
11. T F—Much of the "sizing up" can be avoided at a fire when the officer is familiar with the various things pertaining to the building on fire.
12. T F—Sprinkler shut-offs should always be located before leaving a building inspection.
13. T F—Hot water heating systems, in so far as the pipes are concerned, are practically non-hazardous.
14. T F—The Fire Department is never called upon to deal with pyromaniacs.
15. T F—Construction and contents of a building must be given equal weight in determining the actions of a department at a fire.
16. T F—Carbon dioxide is used with much success in the extinguishing of cargo fires.
17. T F—Fires in transformer rooms can sometimes be smothered out by keeping the room sealed.
18. T F—Unconsciousness caused by electric shock can generally be overcome by means of artificial respiration.
19. T F—Tunnels are sometimes found connecting one building to another.
20. T F—In cases of electric shock, artificial respiration must often be used for an extended period of time before results are noted.
21. T F—Lack of structural knowledge of buildings in their districts never endangers firemen working at fires.
22. T F—It is unessential that the proprietor or person in charge of property inspected understand the object of the inspection made by firemen.
23. T F—It is good practice for members to familiarize themselves with the construction, occupancy and contents of the different buildings in their respective districts.

Completion Statements

24. Gasoline engines are safest when placed on ..... floors.
25. Spontaneous ignition in coal piles can be prevented by piling the coal in ..... piles.
26. In operating around fires in industrial plants where fire apparatus is maintained for use, it is safe practice to use only ..... ladders.
27. Where a line is laid horizontally, the engine pressure is equal to ..... plus .....

Answers to Questions in Previous Issue

1. If the fire can be extinguished with the apparatus on hand, it cannot have attained very great headway, or the building is not likely to be of any great area. Fires in printing plants usually spread with considerable speed, due to the usual oil soaked condition of the floors, together with the presence of "furniture" used in making up type pages.

Proceed as follows: Immediately stretch two lines, one to connect to the sprinkler system siamese and the other to the standpipe siamese.

The employment of the sprinkler system will hold the fire, and will discharge water right where it is needed. While the sprinkler tank in connection with the system may supply water for some time, it is not good judgment to depend upon this source; hence, the stretching of a line to the sprinkler system.

Order members of engine company to take two lengths of hose at once to the floor beneath the fire floor and stretch from standpipe outlet up stairway to fire floor and get a line in operation on the fire.

Direct available members of truck to thoroughly ventilate building, and open doors for engine companies as needed.

In ventilating the building, two men would be sent to the roof to open up over stairwells, or other vertical passageways through which fire, smoke, and heat may rise.

Other members of truck company would be directed to place ladders, and to open windows on the first floor to thoroughly ventilate the building. By this placement of apparatus, the fire would be held through the agency of the sprinkler system, and the line from the standpipe would be applied where most needed. Building hose would not be employed by the Fire Department, for it may be of uncertain quality and may burst under the pressure in the standpipe system as furnished by the pumper.

2. The usual rule is to permit only three men on ladders over 30 feet in length; some departments, however permit four men on 50-foot extension ladders and five on aerial ladders.

3. Slowly. This prevents "water ram" or "water hammer" which might burst the hose, blow off a coupling or stall the pumper.

4. True; 5. False; 6. False; 7. True; 8. True; 9. False; 10. True; 11. True; 12. True; 13. True; 14. True; 15. False; 16. True; 17. True; 18. True; 19. True; 20. True; 21. True; 22. True.

23. . . . soft (sandy or muddy). . . .
24. . . . hook (roof). . . .
25. . . . 1¾-inch. . . .
26. . . . less. . . .

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

TEST OF FIRE APPARATUS MOTORS

FIRE apparatus belong to the class of emergency equipment. When there is a need for it, then there can be no excuse for delay.

In some stations, there are frequent calls for fire apparatus, and in others, the calls are not frequent. But in either case, there must be some assurance that the motor of the apparatus is capable of starting off promptly.

Some departments require that the motor be turned over for a short period of time each day. Others do not believe that such a plan produces the best results.

The problem in full that is treated in this issue appears in the box on this page. The discussion on this subject will be concluded in the next issue.

Discussion of the Question

T. P. Treadwell, Chief, Fort Collins, Col.: Immediately after roll call at 8:00 a.m., the incoming drivers of each piece of apparatus before accepting his piece of equipment checks the water, lights, oil, gas and tools in the tool boxes, and starts the apparatus by cranking, moving the apparatus either forward or backward eighteen inches, letting it run idle for a period of five minutes. This thoroughly oils the cylinders, and gives the engineer a chance to check the generator and oil pressure. By this plan the engineer knows whether or not his apparatus will start instantly.

We do not use a road test, but we do start the motors at the change of platoons at 8 a.m. and again at 6 p.m., if no alarms are answered during the day. On Saturday of each week, each piece of apparatus is sent to the city shops for a test of air in tires and to keep the gas tank full. The Master Mechanic tests the batteries twice each week.

I do not believe starting the motors twice a day, where there are no runs, is harmful to the machine, for the reason that you get a check of the motor under motion, which oftentimes discloses minor defects that would need immediate adjustment. During the drill tower period, the apparatus is driven to the drill tower each morning to give the engineers a chance to check the apparatus. After each run the apparatus is thoroughly checked by the engineers and captain or officer in charge of each piece of apparatus.

Ray H. Hare, Chief, Yakima, Wash.: We used to start our motors twice a day and allow them to warm up for three minutes. In making an analysis of this practice we found some of the results to be as follows:

Each motor was started 730 times in one year. Each battery was subjected to 730 useless burdens. Our quarters were filled with a like number of charges of exhaust gases. Each motor ran a total of 36.5 hours, equivalent to 912 miles of road running at the rate of 25 miles per hour.

Included among other detrimental factors found was the dilution of crankcase oil on account of the use of the choke; engine wear and harmful vibration; expense of battery replacements and repairs; expense due to more frequent overhauls of motors, and expense of gasoline and oil consumption.

We now obtain better results by keeping the batteries fully charged; by frequent cleaning and inspection of spark plugs, magnetos, distributors, switches, wiring and other ignition parts. We know of course, that good compression, a good grade of gasoline and proper carburetor adjustments are also important factors.

Thomas F. Finnegan, Chief, Helena, Mont.: We examine the motors carefully every time they return from a run. Trucks are also rolled over every morning to test the batteries and they are then primed, and again primed at night.

We start the motors every Saturday morning and run them for about fifteen minutes, but we do not take them from the station.

I believe it is harmful to the machine to just start the motor twice a day; it is not run long enough to thoroughly lubricate all the wearing parts, and therefore tends to make the motor sluggish.

W. E. Crawford, Chief, Hoquiam, Wash.: We purchased our first auto apparatus (two units) twenty-four years ago. We have installed new rings in both of them, but no pistons.

For about three years, we started them morning, and evening, and let them run about 30 seconds. About that time I discovered they were not getting oil up to the cylinder walls. So we then started running them five minutes every morning and found by inspection that they were getting the oil up, and they have been running good for twenty years.

I do not advocate the road test, as running them on the floor at a good speed will get results.

We keep the apparatus room at about 65°. We have a blower system that comes up through the floor, and slips over each exhaust. This enables us to run the motors without filling the house with smoke. It is my own get-up and works fine—have never seen any thing like it, would be glad to send a drawing of same to any one wishing to install one.

A. C. Forgay, Chief, Sweetwater, Texas: My department consists of nine paid men and eight volunteers. We are equipped with one 750 g.p.m. pumper and hose truck, one service truck with a 750 g.p.m. pump, two 500 g.p.m. pump and hose trucks, one chemical truck and one Chief's car. This equipment is in two stations.

Our methods for making sure that the motors on our apparatus will start instantly is: When we return from each fire, the trucks are placed in the station and thoroughly inspected and serviced. Each Monday morning all apparatus is driven out of the station, thoroughly warmed up and placed back in the station ready for the next fire. Every morning the batteries are tested to see that they are fully charged and in good condition. I consider this method a better practice than starting motors once or twice daily. I have tried starting the motors every morning and found that this practice is harmful to them.

I found that in starting the trucks every morning, the motors are not thoroughly warmed up. The motors can not be run long enough in the

HERE IS THE PROBLEM

What method do you employ for making sure that the motors on apparatus will at all times start instantly?

Which do you consider the best practice: Starting motor twice a day at change of platoons or, a road test of say half an hour, once a week?

Do you believe that starting a motor twice a day, especially where there are very few runs, is harmful to the machine?

If so, why?

station for a proper warm-up, without some special arrangement for the disposition of the exhaust gasses. Due to the large bore and combustion chambers in the pumping engines, a large amount of raw gasoline must be choked into the cylinders to start. A large amount of this gasoline passes the piston rings into the crank-case, washing the cylinder walls and leaving them dry of oil for the next start. The gasoline in the crank-case creates a muck in the oil pan and fouls the oil.

Jesse A. Fisher, Chief, Annapolis, Md.: To make sure that the motors of our apparatus will at all times start instantly we have the master mechanic check the entire ignition system and the fuel system weekly. The batteries on our apparatus are checked daily by the drivers. We have a charger in each house and the charger lines are equipped with polarized plugs, and the apparatus have receptacles. This enables our men to charge batteries without removing them. This system keeps our batteries always up to full charge which is a vital point for quick starting.

Our apparatus is started and run for ten minutes, twice a day, at the change of platoons. This gives the oil a chance to circulate properly and provides a daily test on the starting efficiency of the motors.

I do not believe that starting a motor twice a day, especially where there are very few runs, is harmful to the machine, because as I said before, it helps keep oil circulated through moving parts and provides a daily test for starting.

P. E. DePaul, Chief, Vancouver, Wash.: For quick and sure starting of trucks in our department we keep our batteries at 1.225 sp. gr. at all times, check our ignition points and spark plugs. The temperature of our truck room very seldom gets below 70 degrees. On returning from a run the drivers report any faulty performance. We have a portable charger at the station so hooked up that should the driver forget to disconnect, the plug is pulled without hurting the charger when the truck moves ahead.

In the first place, some manufacturers warn against this practice. Their reason is that in starting the motor, the choke has to be used and a great deal of raw gas is drawn into the cylinders. This washes the film of oil from the walls of the cylinder. It then runs or gets by the rings and into the crankcase, diluting the oil there. Another reason is that the motor is warmed up, and if a call should come in soon after this, the motor might flood more easily while warm, if the driver was not very careful with the choke. It is my idea that a motor could be started ninety-nine times and work perfectly, but that this would not guarantee that the motor would start the one hundredth time. I cannot recall any time in the last five or six years in this department where we could not get started, due to a faulty motor.

We recently purchased a new piece of apparatus and the magneto was equipped with an impulse. I find that the motor starts much quicker than the motors without it. I have been thinking very much of putting them on all our magnetos.

H. G. Putnam, Chief, Winona, Minn.: We start our motors every morning at eight o'clock and run them not less than eight minutes, in which time we feel the oil will have a chance to thoroughly circulate through every bearing, and that in that length of time the motor becomes warm enough to vaporize and evaporate gasoline remaining in the cylinder head, so it will not run down into the crankcase to form sludge.

Regarding a road test of half an hour, or starting motor twice a day, we do not consider either one of these necessary, if the motor is started and run each day for three minutes or more and checked carefully once each week.

I do not believe it harmful to start a motor twice a day, where there are very few runs; on the other hand do not think it necessary.

B. E. Bangerter, Chief, Mankato, Minn.: Our motors are started once a day, by the platoon coming on duty, and they are run for a very short period, possibly no longer than half a minute. We consider this sufficient, as we have had very few failures of motors to start over a considerable number of years, and I believe road tests once a week are unnecessary, unless there is some particular reason to test apparatus. Do not believe that starting the motors once a day is harmful to the machine, as we have experienced no disastrous results in over twenty-three years of this daily practice.

W. A. Foster, Chief, Boise, Idaho: In Boise we work two platoons, changing shifts each day at noon. At one o'clock the incoming shift starts the motors of their respective pieces of apparatus and any irregularities are reported to the Master Mechanic. We average 25½ runs a month and, during seasonable weather, drill twice a week with the rigs. I do not believe there is any appreciable harm done to the motors, if the warm-up is properly done. By that I mean, to run the motors slowly until the oil is pumping.

I believe that starting the motors is preferable to a road test for these reasons: A road test would tell nothing about whether or not the motor would start. It is possible that a motor could be very difficult to start, but would perform perfectly once you got it started. The only excuse I see for a road test is after an overhaul of some kind.

We check very carefully on our batteries, terminals, starting motors, etc., keeping them in first class shape, and we try to keep the engine-room temperature at least 65 degrees. To date we have experienced no difficulty in starting.

O. B. Kinsman, Chief, Watertown, S. D.: We start our motors each day, to be sure that every thing is in good working order. Also check up on batteries and other little incidentals that might cause trouble. I believe that a motor should be run for say five minutes, not too fast, but at a speed that will insure good oil circulation, especially in motors that have the splash system. I have never observed any ill effects on a motor if it is started once or twice daily.

L. R. Morris, Chief, Ames, Ia.: Our motor is started each morning, if it has not been out within six or eight hours. I think the motor should be started each morning, unless a run has been made during the night.

I don't believe starting a motor each day is harmful to the motor. In fact if it is not started for, say a week or more, the oil drains from the bearings. If you start out fast, there might be a chance of it being hard on the bearings. We have one truck that has been in service 21 years and we have always started it every morning unless we had recently had a run.

Emil A. Johnson, Chief, Boulder, Col.: After every run and when apparatus and equipment are cleaned, the motors, apparatus and equipment are carefully gone over to see that every thing is in working order. Battery and tires are tested twice a week. The better practice is a road test of say half an hour, once a week. I believe that running a motor or idling in the station is harmful to the motor. My experience has been that a motor will be run at a high speed to charge the battery. We have not started our motors here at Boulder (except to answer an alarm) for the past six years, and have never had any trouble in starting.

We do take the apparatus out for a road test at times. I believe the road test is the best, as all the working parts of the apparatus are tested as well as the motor.

J. H. Gordon, Chief, Ontario, Cal.: I dare say there is no method with which one can be sure that the motor will start. The best method to make reasonably sure of starting, is rigid inspections for mechanical defects. A failure may be had ten minutes after coming in from a run where the motor functioned perfectly.

We do not believe in starting the motor once or twice a day, where there have been no runs. We run all our equipment outside each Saturday when changing platoons, and this is the only time our motors are started, except on runs. The apparatus is run out for the purpose of mopping out the lower floor.

We feel that daily starting is injurious to the motor, for several reasons. In the first place, the expansion of the piston is greater than that of the block and causes undue wear. Secondly, daily starting leaves a certain amount of gasoline in the valve chamber and causes pitting of the valve heads. This is particularly true of low compression motors using "Ethyl" gasoline, and thirdly there is a certain amount of gas getting into the crank case, thinning the oil, causing improper lubrication and untimely oil changes.

We are using "aviation" gasoline in our low compression motors. We have triple carburetion using 3¼-inch Windfields to each block on our La-France pumpers. With the carburetors properly set and syncronized, we have

TO BE CONCLUDED

It has been necessary to divide this discussion in two sections, and to conclude it in the next issue.

practically eliminated starting failures. Also, we have eliminated the use of heaters, which has saved us the price of the carburetion time and again, and although we do not get mileage from "aviation" gasoline, we do get quick starting and perfect performance, and after all we are not interested in mileage.

* * *

Answers to Previous Questions

The following replies were received in answer to a previous question regarding salvage work:

Roy Elliott, Chief, Medford, Ore.: We do salvage work. We have sixteen covers and they are carried on the two pumpers. I would say the life of a cover is about three years.

W. E. Holland, Chief, Raleigh, N. C.: Salvage work is performed by our department. On our service truck we carry twelve salvage covers. The useful life of the cover depends on the care taken of it. We are one hundred per cent for salvage work because it saves furniture, etc., from water damage.

Wm. F. Woods, Chief, Portsmouth, N. H.: We do salvage work in our department. We have three covers which are carried on the pumper and ladder truck. I would say ten years is the useful life of the cover. We have prevented considerable water damage by this operation.

Leo Urbanski, Chief, St. Joseph, Mo.: We do perform salvage work in our department. We have fourteen covers, which are carried on all apparatus The useful life of these covers range from three to ten years.

Salvage work prevents a lot of water damage and earns public favor for the Fire Department.

A. L. Duckett, Chief, Asheville, N. C.: Our department does perform salvage work. We have thirteen covers and they are carried on all apparatus except our reserve engine. Five years is approximately the useful life of a cover. We figure that salvage work reduces our fire loss by approximately fifty per cent.

E. A. Johnson, Chief, Boulder, Col.: We do salvage work in our department. We have twelve salvage covers which are carried on our combination hose trucks. Our covers have been in use the past six years.

Salvage work is of a special value in reducing the water damage at fires. Every fireman is naturally anxious for a low fire loss, as it reflects directly on the department record. Salvage work demands more than spreading covers over stock. Firemen should learn ways of performing their duties in a workman-like manner, so as to keep the damage down. The reckless smashing of doors and windows, the destruction of furnishing and stock of goods in tracing fire, the unnecessary or unworkman-like opening of roofs and skylights should be discouraged.

Efficient tools have been designed to open doors and windows, and men should be trained in their use. Before pulling ceilings and side walls, it is a good practice to remove or cover stocks and furnishings. When firemen find it necessary to open a roof, one large square clean cut hole should be made in the proper place instead of several small openings. This procedure results in a small repair cost and makes temporary covering a simple matter. These are methods by which Fire Departments are effecting a material reduction in fire loss.

The smaller departments should make a serious study of salvage work, as salvage work well done will reduce their annual fire loss. Officers of some of the smaller departments have the idea that they do not have the necessary man power to do salvage work. If salvage work is thoroughly understood and the department is properly organized, it can be carried on with much success even in the smaller departments.

C. M. Johnson, Chief, Knoxville, Tenn.: Our department has been performing salvage work for several years. We have at present about fifty covers, size 19 x 10 feet, 12 x 12 feet, 12 x 14 feet, and 14 x 16 feet. The majority of our covers are carried on service trucks; however, we carry a few on our aerial truck, and from two to three on each pumper. The service truck company performs most of the salvage work.

The result of this work is a saving to us in many thousands of dollars of water damage each year. We figure that if our department were without salvage covers it would be lacking in very valuable equipment.

The average useful life of covers in our department will range from eight to ten years.

Barney J. Houston, Chief, Cincinnati, Ohio: Our department performs salvage work. We have three or four covers on each piece of apparatus in outlying houses. They are covered on the pumpers and ladder trucks. A cover normally lasts five years, depending upon the type of service for which it is used.

Salvage work results in a more satisfied public and assists materially in reducing the fire losses. It affords early habitation of people in their homes after the fire. A great many times in business houses it allows operations to be resumed, enabling employees to return to work in a shorter period of time. It also results in a saving of a great amount of stock that otherwise would be damaged by water. It gives the men of the department a better sense of satisfaction, seeing a job that has been completed. It develops within the men a keener sense of housekeeping. In Cincinnati, the Underwriters Salvage Corps is maintained by the Insurance Companies and they have a central station in the basement of the city hall. Due to the fact that Cincinnati has an area of 72 square miles, it would be difficult to render efficient service throughout the entire area, therefore the Cincinnati Fire Department and the Underwriters Salvage Corp has coordinated its efforts to overcome this situation in the following manner. The corps loans to the Fire Department sufficient salvage covers to be carried on the pumpers and ladder trucks in all outlying districts. This averages three to four covers to a company. Upon arrival at a fire, if the man in charge sees the need of more covers, he immediately sends the call and the corps responds. In the territory that the corps does respond, the two departments cooperate with each other.

Geo. Alford, Chief, Pine Bluff, Ark.: Our department does perform salvage work. We have ten salvage covers, which are carried on the engine and hose trucks. The life of the covers depend upon their use. Five to seven years is approximately the life of the cover. Salvage work lessens fire loss, prevents irreparable loss of relics, antiques and other priceless articles. Skillful and effective salvage work at fires is half of the fire fighting job. It is to be regretted that many Fire Departments are called to fight a major roof fire, and when the fire is out to go inside and see the damage done to contents by water alone. Modern fire fighting of today demands efficient salvage work either by regular firemen or by salvage corps paid by insurance departments.

Fire Departments of smaller cities and towns perform this work with regular firemen and in many cases many thousands of dollars' worth of valuables may be saved. The Pine Bluff Fire Department has practiced salvage work for several years and has saved from eight to ten thousand dollars annually in salvage work alone.

Salvage work strengthens the Fire Department in the eyes of the public.

Salvage work is just another step toward making a better and more efficient and effective Fire Department. I consider any Fire Department insufficiently equipped unless said department is ready for salvage work. It pays big dividends with decreased fire losses.

W. F. Israel, Chief, Detroit, Mich.: We do perform salvage work in the department. We have 165 covers, 140 covers in service and 23 covers as spares with two covers at the training school to teach men how to throw the covers. All ladder companies carry four, and the four rescue companies carry five covers each.

Life of a cover depends upon what use the cover gets. A cover may be destroyed or damaged at the first fire due to nails, glass or tin. I would say the approximate life of a cover is four years.

Salvage work benefits the people who carry no insurance, it also benefits the insurance company where insurance is carried.

F. W. Donnelly, Acting Chief, Lincoln, Neb.: We perform salvage work and have in service 18 covers, carried by the truck companies and outside engine companies. The useful life of a cover ranges from four to six years.

Salvage work results in the protection of stock not exposed to fire, protection of buildings from water that is used to extinguish fires, through seepage through walls, ceilings, etc. Salvage work and thorough overhauling aids very materially to the final extinguishment of fires and in numerous cases renders a valuable means for determining the definite course of the fire. All partially burned roofs are covered by our department to prevent further damage by rain and snow.

The following replies are in answer to a previous question regarding the type of floodlighting used, and the type preferred:

N. A. Phelan, Chief, Pittsburgh: We are now using a Homelite portable, 1,250-

watt generator. It supplies one floodlight 500-watt bulb and two spotlights with 250-watt bulbs. The spotlights have an adjustment making it possible to diffuse the rays.

I prefer the separate gasoline driven generator as it costs only a fraction of other flood lighting equipments. Its portability and compactness permits it to be mounted on any piece of apparatus. Both generators and lights can easily be carried to the front, side or rear of a burning building or to adjacent buildings. Long cables are not necessary, minimizing danger of accidents to firemen. Generators can be operated anywhere. For overhauling work this equipment can be left on the job, and the apparatus can return to quarters for other calls. Once the engine is started, this unit requires no further attention.

I have found floodlights helpful at all night fires, where there is much smoke, where overhauling is necessary, wetting down ruins, maneuvering ladders, at fires on the water front where there are little or no street lights, in narrow alleys which are usually very dark and where a maze of fire escapes and wires are encountered.

After a recent large fire that had extended over an entire city block, much overhauling was necessary at night. These portable units were used and proved indispensable. I am planning to double my present equipment.

C. G. Hamel, Vice-President, Manhasset-Lakeville, Fire Dept., Manhasset, L. I.: Several years ago, our department purchased a floodlighting truck. This truck, a Ford V-8, is used by the police unit for emergency work as well as floodlighting. The floodlighting consists of a five k.v.a. generator driven through a power take-off by the truck motor. At present, this supplies four 500-watt flood lights.

There are 1,000 feet of connector cable and various connectors. The floodlights are mounted on portable stands and are usually carried about. The floodlights have been very useful at night fires, both outside and inside the building. They have also been used in tight, close places, in very wet places and during heavy rainstorms where we believe gasoline driven lights would be impractical. The floodlights have been used also for emergency work such as wrecks, cave-ins and in one instance when the electric power of a large hall failed, the lights were brought into the crowded hall and prevented panic conditions. We plan to eventually add a few more floodlights to our equipment and probably a communication system in conjunction with the lights.

Higgins Chief of Schenectady

Acting Chief James J. Higgins of Schenectady, N. Y., has been appointed head of the department to fill the vacancy caused by the retirement of Chief Derra.

Chief Higgins joined the department in July, 1907, as a volunteer. On March 27, 1908 he was given a permanent appointment, but he resigned in November, 1909. In 1915, he again jointed the department, was advanced to Lieutenant in 1922 and promoted to Captain in 1924. In April, 1930, he was appointed an Assistant Deputy Fire Marshal and Deputy Chief in December, 1936.

Counting his service as a volunteer, he has been in the fire service for more than thirty years.

Some of the Highlights During the Observance of Fire Prevention Week at Los Angeles, Cal.

1—A puppet show arranged at one of the city's 450 schools. The play was written and the puppets constructed by the students. 2—The fire prevention message is even exhibited against the sky. 3—An old steamer was hauled through the city streets to call attention to the advance of fire apparatus. Two fire inspectors passed out fire prevention literature. 4—This exhibit, arranged in a parochial school, was one of the many placed in schools.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Chemicals, Etc.

To the Editor:

Would you kindly supply me with the following answers?

What is liquified gas? In what occupancies would you expect to meet it in case of fire? What are its principal hazards?

If the discharge from a 1¼-inch nozzle is 206 gallons per minute, and the line consists of 400 feet of 2½-inch hose, what will be the required pump pressure, if the discharge is doubled; the conditions as to amount of hose and size of nozzle remaining the same? Show work in detail.

Give nature or production source of each of the following and tell the common use of each, where likely to be found, how stored, inflammability, probability of explosion in itself or in combination with other materials and the effect of the use of water as an extinguishing agency in case of fire:

Amyl acetate.

Benzine.

Acetic acid.

In regard to the carbon dioxide fire extinguisher:

1. How is it stored in the container?
2. How is it discharged?
3. Temperature of the discharge.
4. Effect on fine fabrics and machinery.
5. Electrical conductivity.

E. W.

Answer: A liquified gas is a gas which is under such pressure as to create a liquid. A typical example of liquid gas is liquid carbon dioxide. It remains in liquid form only while under terrific pressure. As soon as the pressure is released, the liquid is vaporized.

The number of liquified gases is great and it would be impracticable to give all of the gases found in liquid form and to state the uses to which they are put and their principal hazards.

Only three will be discussed here, namely, carbon dioxide, oxygen and chlorine.

Carbon dioxide is found in beverages, carbonating plants, in fire extinguishers and in dry ice manufacturing. Its chief hazard is the possibility of tank rupturing, although this is negligible in view of the present high standard of tank design.

Oxygen is used in connection with oxy-acetylene welding, and may be found in all establishments carrying on such work.

It contributes to combustion, and many materials considered non-combustible burn readily in the presence of pure oxygen. Its chief hazard is its tendency to promote combustion.

Chlorine gas is found in water works plants, sewage treatment plants and in bleaching establishments.

This gas is poisonous and being heavier than air stays near the floor or ground. It is not combustible, but represents a very severe hazard to life. In addition to the foregoing, ammonia might also be mentioned, such as is used in refrigerating plants.

The calculations for the problem involving discharge from nozzle and the necessary engine pressure is as follows: The discharge of 206 gallons per minute is to be doubled, giving a discharge of 412 g.p.m.

The pressure at a 1¼-inch nozzle necessary to give a discharge of 412 g.p.m. is found as follows:

$D = 29.7 \times d \times d \times \sqrt{p}$ where "d" is the nozzle diameter in inches and "p," the pressure in pounds per square inch.

Substituting in this formula the values we know, we get

$412 = 29.7 \times 1\frac{1}{4} \times 1\frac{1}{4} \times \sqrt{p}$.

Reversing this formula we get

$\sqrt{p} = 412 \div (29.7 \times 1\frac{1}{4} \times 1\frac{1}{4})$.

$\sqrt{p} = 412 \div 46.3$.

$\sqrt{p} = 8.9$.

P equals $8.9 \times 8.9 = 79.2$ pounds, the pressure at 1¼-inch nozzle necessary to give a discharge of 412 g.p.m.

Then solve for nozzle pressure by the following formula:

$E.P. = N.P. \times (1.1 + KL)$.

Where K is the factor depending upon the nozzle and hose diameters and is, for 1¼-inch nozzle with 2½-inch hose, 0.248. L, the number of 50 foot lengths of hose in the line, is 8.

Then $E.P. = 79.2 \times (1.1 + .248 \times 8)$.

$= 79.2 \times 3.084$.

$= 244$ pounds engine pressure approximately.

Chemicals

Amyl Acetate: Preparation. Obtained by distillation from a mixture of amyl alcohol, acetic acid and sulphuric acid or by adding a mixture of amyl alcohol (in fusel oil) with sulphuric acid to gray acetate of lime and distilling by steam heat. It may be considered as ultimate product of the industry of destructive distillation of wood.

Properties. Colorless, sweet smelling liquid, with characteristic odor resembling bananas. Boils at 282° F. Specific gravity .88. Flash point is quite variable, but usually between 70-95° F. Its vapors are lighter than air and diffuse rapidly. It dissolves in alcohol, ether, chloroform and amyl alcohol.

Uses. It is one of the most widely used of the solvents of cellulose nitrates, and is the principal solvent used in the preparation of pyroxylin lacquers. It is also used in bronzing liquids, metallic paints, perfumery and in the preparation of imitation fruit flavors.

Shipping. Shipped usually in iron drums and tin cans. Classed as flammable liquid. Requires red label.

Hazards. The manufacturing operation involves the possibility of explosion hazard due to vapors, particularly if mixed with air. Amyl acetate is a typical volatile and inflammable liquid, and has the hazards of this class in a degree higher than alcohol, and less than ether. It is often mixed for solvent purposes with more volatile liquids, such as benzol, toluol, alcohol, etc., with corresponding increase in the hazard. Hazard grading similar to alcohol. The hazard of directing a fire stream on burning amyl acetate would be the same as any other highly inflammable liquid. It would probably cause sputtering of the burning liquid over surrounding materials.

Benzine: Color and properties: A mixture of several of the lighter constituents of petroleum (cymogene, rhigoline and gasoline).

Constants: Specific gravity 0.635-0.660; boiling point 40°-70° C.

Derivation: By fractional distillation of petroleum.

Method of purification: Washing with sulphuric acid, then with soda and redistilling. Containers: tin cans; iron drums. Uses: Solvent. Fire Hazard: Dangerous.

The action of benzine when burning when struck by water streams is precisely the same as with gasoline.

Acetic Acid: Preparation: Obtained on a large scale from pyroligneous acid by neutralizing with lime or sodium carbonate, the resulting acetate decomposed by sulphuric acid and distilled. May be considered as a direct product of the industry of destructive distillation of wood.

When distilled without neutralizing, the resulting distillate is impure acetic, known as wood vinegar.

Commercial Acetic: This is a water solution containing about 30 per cent pure acetic acid. This is a colorless liquid having a pleasant odor and a sharp taste.

Uses: It is used on a large scale to prepare acetates, in the dye stuff industry, and in the preparation of other organic compounds. In some medicines, as a solvent for some organic substances. Found in vinegar to extent of 4 to 10 per cent.

Hazards: Acetic acid, in concentrated form, is combustible, but not classed as an inflammable by Bureau of Explosives which states its flash point to be about

115° F. As obtained from pyroligneous acid the process involves distinct explosion hazard on account of the fumes of acetone liberated when the residual calcium acetate is purified by roasting. Its production by fermentation process is perfectly safe. Wood spirit (wood vinegar) is a dangerous liquid when distilled over lime, for the recovery of the by products; these latter furnish explosive vapors. No particularly noticeable fire hazard is created by water streams thrown on burning acetic acid.

Carbon Dioxide Extinguishers

In regard to the questions on carbon dioxide fire extinguishers, the gas is stored in a container under very high pressure, usually around 1,400 pounds per square inch.

It is discharged by opening a valve which releases the gas to the atmosphere. In other words, as soon as the valve is opened, the liquid carbon dioxide is vaporized and the gas is sent out under high pressure into the atmosphere.

The temperature of the discharge is around 40 degrees below zero F.

The gas has no effect on fine fabrics and machinery, and its electrical conductivity is about the same as air, namely negligible.

W. H. Schultz Dead

William H. Schultz, who retired as Assistant Chief of the Sheboygan, Wis., Fire Department on September 15, 1937, died on November 4 as the result of a heart attack.

He was born in Greisswald, Germany, on July 2, 1880. He entered the Sheboygan Fire Department on October 1, 1905. He served for the past ten years as Secretary-Treasurer of the Wisconsin Paid Firemen's Association. Prior to that he served as its President for three years and one year as Treasurer.

Chief Duchesneau Honored

A testimonial dinner was recently tendered to Chief Joseph E. Duchesneau, Southbridge, Mass., Fire Department, on the occasion of his 25th appointment as head of the force.

The guests included Chief Charles L. McCarthy, Worcester, Chief Arthur Belmore, Webster; Chief Frank C. Newman, Melrose; Chief Thomas H. Slaman, Wellesley; Chief John C. McNally, Somerville; John Crewe, Assistant Fire Warden, Westboro; Plant Chief Robert E. Cross, American Optical Company; and Edward J. O'Neill, Roslindale. The principal speaker was Albert B. Wells, Southbridge.

A handsome bronze plaque was presented by friends of the Chief. This bore a likeness of the Chief and the following inscription:

"Joseph E. Duchesneau, First Permanent Chief of Southbridge, Appointed 1913, Department Motorized the Same Year. This Tablet Dedicated By His Friends in Testimony of Affection and Gratitude for Loyal Friendship, Devotion to the Public Welfare, and Service to the Highest Ideals of American Citizenship."

HARRY BELKNAP.

By William Paul Babcock

"Empty Heads"

THAT's what Bill Cashman thought of us rookies when we had overcome the "Strip-Tease" and passed along to another job.

The thought was most naturally suggested to him by the nature of the surroundings, where we were sent to strip covers, and by the same token, our dumbness was actuated by these conditions.

It all happened like this. The premises involved were up along Greene Street, where the worst "loft" risks were located, and the particular loss was in a doll factory.

Now, you wouldn't think that a lot of *empty doll heads* lying in heaps all over the floor would be worth much, would you? No, neither did we, but did we learn differently? Aye, and that pronto!

There wasn't much space to walk about the loft, and as I have intimated, we saw no reason to step around like a toe-dancer, and when we were ordered to "get over in that corner and bring that cover out" we took the shortest route, which was over the pile of empty heads.

You've heard the old gag—"did she fall or was she pushed?" Well we were neither, but were we stopped, or were we *stopt!* A big noise emanated from our now famous commander, such as would put the fear of the Almighty into even a Dillinger. Yes, very much like what you heard when you bungled that ballooning of covers at the Salvage School.

It seemed, according to official advices about that time, that many of these empty heads really had a cash value, and therefore, of course, a "Cashman" value, and it was also related that such manufacturers would not hesitate to charge the poor insurance companies plenty for each broken konk, and after all, we were informed, it was our job to *salvage*, not *damage* any and all kinds of property within those premises, and so we were shown how to pick our steps in a manner calculated to avoid further damage.

You fellows who, today, have the benefit of Bill's School, don't know how lucky you are, for you are being taught all the benefits of his many years of experience in a nice, comfortable way, whereas we who were pioneering in this work 21 years ago were getting our training in the Academy of Hard Knocks. And when you get through the course you won't have empty heads.

* * *

Well, well, who'd a thunk it—here comes Ole Saint Nick again! My, how the time flies! But it certainly has been a pleasure, passing the baloney around for a year, and I only hope you have enjoyed it as much as I hope you'll enjoy your holidays.

And that goes double for Ye Scribe of Ye "Watch Desk" and his gang of Westchester Fire Chiefs, who have very graciously and magnanimously taken into their fold the poor scribbler of "The Cover."

And here's to a Happier New Year for all and sundry.

Thanx for readnit,

"BABBY."

SEND IN YOUR NEWS

The Editor of "The Cover," invites Fire Chiefs and salvage company officers to submit items for publication in his column.

You fellows who are on the firing lines can do a service for the entire field if you will give this cooperation to Mr. Babcock.

Why not tell us of some of your experiences with salvage work?

THE EDITOR.

Collins Chief of Elmira

Deputy Chief Daniel P. Collins has been named Chief of Fire Department, Elmira, N. Y., to fill the vacancy caused by the death of the late John H. Espey.

He joined the department on January 14, 1905. In February, 1922, he was made Acting Lieutenant, and the appointment was made permanent in August when he took charge of a truck company. Advancement to Captain came in October, 1924, and to Deputy Chief in March, 1928.

Fire Surgeons Meet

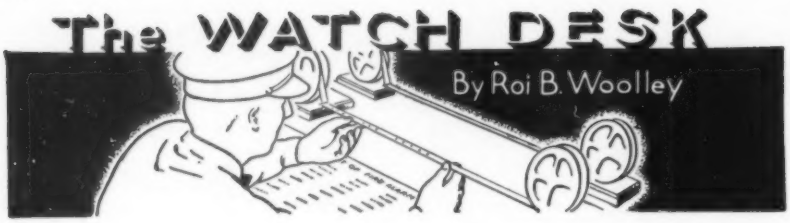
There is one organization that is not very well known to those in the fire-fighting field. It bears the name of "International Association of Police and Fire Surgeons and Medical Directors of Civil Service Commissions," and for years it has quietly striven to raise the standards of medical and surgical treatment of firemen and policemen.

Dr. Harry M. Archer, who needs little introduction to the men in the fire service, is Secretary.

The annual convention was held in Philadelphia November 11 to 13, and on the program were some of the outstanding men in the medical profession.

The officers for 1938 are Dr. William C. Ryan, Philadelphia, President; Dr. Gerald H. McMahon, Detroit, Vice-President; Dr. John J. White, New York City, Treasurer; Dr. Harry M. Archer, New York City, Secretary.

The next convention will be held at Atlantic City, September 15 to 17, 1938. New York City extended an invitation for the 1939 gathering, as that time the World's Fair will be in progress.



Our inquiring reporter overhauls the firemanic news of the days.

Fire Siren Lures Lost Lads

When Lowell Hoyt, aged four and Junior Unko, five, disappeared from homes of Mrs. H. J. Hoyt and Mrs. John Unko, Clay Center (Neb.), a dozen neighbors searched unsuccessfully to find 'em. Then somebody sounded fire alarm to summon more searchers. Whereat the youngsters came from a wheat bin where they had been playing and asked: "Where's the fire?" Here's another idea for you.

Fire Rings Doorbell—Comes In

Flames filled the hallway of home of Alfred E. Corbin, Montclair (N. J.) early one morning when Mr. Corbin was awakened by ringing of his doorbell. Fire apparently set it off by causing short circuit in wiring. Corbin awakened wife, her brother, daughter and maid, and carried his youngest daughter to street. Firemen took elder daughter and maid down ladders.

Sad "Tale"

Three gallant readers shot this 'un to us. Seems that out in Cincinnati (O.), Polly, the zoo's prize ostrich, was her own fire department when a visitor inadvertently tossed a burning cigarette on her back. With tail afire she went into combination of highland fling, swing, big apple and whatnot, but before keepers could reach her with extinguisher she managed to reach around with her long neck and pluck out the burning feathers with her bill. Talk about doing "picket duty!"

Jealous Mailmen

Our Sioux City (Ia.) correspondent says that there's rivalry between local firemen and mail carriers, all over number of gals who have been caught trying to post letters in fire alarm boxes. When nifty looking gal was recently caught in the act, John Yeager, Ass't Fire Chief, with just a touch of irony mixed with gallantry, said: "Lady, here we are. May we take your letter to the post office?" That was too much for the gray coats, who claim monopoly on handling mails (if not females).

Five Causes Contributed to Hindenburg Disaster

Exhaustive experiments conducted in Germany have demonstrated that five separate causes contributed to Hindenburg catastrophe at Lakehurst (N. J.), according to Prof. Max Dieckmann, of Autospheric Electricity Institute. He claims disaster would not have occurred had any of these causes been lacking: (1) *Hydrogen escaped from the balloon during the last minutes of the voyage.* (2) *The ship was immobile and thus the ventilation effect whereby escaping gas usually is dissipated could not take place.* (3) *Rain made the body of the ship highly conductive.* (4) *Sparks generated atmospheric electricity and* (5) *There was high tension between parts of the ship.*"

Firemen Afire at Fire Convention

No less than four newshawks sent us the story of George Kramer, Philadelphia fireman who, while attending annual convention of Pennsylvania Firemen's Association, let out a yell, jumped from his seat, clapped his hand to a pocket from which smoke was pouring and, for the moment, interrupted a hot speech on "fire prevention." Charles Gill, Acting Chief Engineer, Philadelphia F. D., jumped into action, yanked off victim's coat and extinguished fire, said to have been due to matches.

News Flashes

Family of five and a hired man perished when fire swept frame farm house near Waterford (O.). . . . More than 3,000 reels of film burned in Port-Of-Spain (Trinidad), cutting off supply of 50 theatres. . . . Nearly 5,000 firemen, representing many N. J. municipalities, paraded, made merry at Elizabeth (N. J.) last month. . . . N. Y. C. will have 2-way radio cars for Assistant and Deputy Chiefs. . . . Seven firemen and a woman were overcome at Solvay, near Syracuse (N. Y.), when 8 drums of chloride powder in blazing truck spread fumes through part of Solvay's residential section. . . . National Federation of Property Owners and Rate Payers, England, advocate government compulsory insurance against war damage due to fire. . . . Accidents at F. D. training schools are rare. Particularly regrettable was death of fireman Walter Peters, Eng. 1, New Rochelle F. D. (N. Y.), who plunged 20 feet to concrete paving while sliding a rope at drill school. . . . Six died, 12 were injured, when tanker burned at Baytown (Tex.). . . . Only 17 out of 72 Batallion Chiefs of the New York F. D. "made the list" for Deputy Chiefs at the last exams. . . . Charles Davison, resident of Middletown (N. J.), lost his auto keys, pulled fire alarm box, threw town's 899 pop. into feverish excitement and got $50 fine as result. . . . Rev. Charles Simmons, 26-year old pastor of Holyrood (Kan.) Free Methodist Church, was accused of burning two autos and a truck to collect insurance. . . . Two men in Chelsea (Mass.) were swept to death in 6-ft. water main after gas had felled them as they opened a valve. Third man was rescued. . . . In Schenectady (N. Y.) two men were rescued from smoke and fumes inside a tank, after they collapsed while welding seams. F. D. reported they were overcome when air-line broke. . . . In Buffalo (N. Y.) two men died and one was saved when overcome by fumes from a gasoline storage tank. . . . With opening of hunting season in New Jersey 42 fires were started by hunters. Well, if they can't kill the game one way they figger they can kill it another. . . . New York City's firemen will play Santa by reconstructing toys; it is expected that last year's record of 35,000 will be surpassed. . . . Six students of New Bedford Textile High School, New Bedford (Mass.), were injured (one fatally) when unauthorized chemical experiment wrecked laboratory; resulting fire was quickly snuffed out. . . . No. 1 pumper, 50-year relic of Cambridge (Mass. F. D.) will be preserved in Washington. . . . Battalion Chief Rogers, with 50 years in F. D. service, Albany (N. Y.), collapsed while fighting fire, died later. . . . When John Harmen's gas and light was shut off, the 73-year old W.P.A. worker (New York City) tried cooking on oil stove, which exploded, injuring four persons, setting fire to kitchen. . . . Sam Hutchinson, 61, Bronx (N. Y. C.) watchman, also was badly burned when oil stove he was trying to light exploded. With clothes afire he ran to street and turned in alarm. . . . Twenty-eight elderly women and 13 children were assisted to safety when fire occurred in Episcopal Church Home, Rochester (N. Y.). . . . Trailers present hazards! Three children died, mother was badly burned trying to save them, when fire destroyed auto trailer home near Sterling (Col.). . . . Chief and Commissioner John J. McElligott, N. Y. F. D., is organizing a "speaker's bureau," composed of about 1,000 firemen, who can talk on fire prevention and fire service topics. . . . In Seattle (Wash.) heroes' graves were dug for father and mother of five puppies who lost their life trying to shield their progeny from flames in a burning house. . . . Eight firemen were hurt as result of half million dollar fire in York (Pa.)—four at the fire and four in accident while responding to blaze. . . . Fifteen hundred pupils are said to be endangered by subterranean mine fire beneath their school in Scranton (Pa.). . . . When 21 members of Boy Scout Troop in Philadelphia (Pa.) camped in barn, somebody forgot his scout training and set place afire. Two boys were seriously burned.

Note to contributors: If you do not read your news contribution in the next issue of FIRE ENGINEERING don't despair—if it's suitable it will utlimately find its way into print.

Editor, Watch Desk.

WHAT DO YOU KNOW?

The Editor of "The Watch Desk" welcomes contributions from readers of FIRE ENGINEERING that briefly give facts about interesting, odd things that have to do with fires, fire fighting, etc. Address "Editor, Watch Desk."

Two 3-Alarm Fires Fought in Dallas

Dallas, Tex., firemen fought two fires, for each of which three alarms were sounded, and due to the prompt response of a sufficient number of com-

Fire Raging Through the Upper Part of the Church

panies, both fires were confined to the buildings of origin.

On Sunday morning, October 24, the Ervay Street Methodist Church, located at South Ervay Street and South Boulevard, was damaged by a spectacular fire which raged through the upper portion of the building, destroying most of the roof. Due to a delayed alarm, the fire had gained considerable headway before arrival of the apparatus. The first alarm was received by telephone shortly after 8 a.m., and was followed immediately by second and third alarms.

A line was carried up a 75-foot aerial ladder to fight the fire in the steeple. Tarpaulins were used to cover furnishings, but a $10,000 organ was damaged by water. Fire is believed to have started from a gas heater, which was lighted by a caretaker, who then left the building. The total damage was estimated to be in excess of $15,000.

A fire which started shortly before six a.m., on October 28, totally destroyed the plant of the American Smelting and Refining Company at 1012 Powhattan Street. Fire was discovered by a negro night watchman, who drove two trucks from the blazing building. One truck, the rear portion of which was afire, was parked under telephone wires a short distance from the building and flames from the burning truck melted heavy lead cable covering the wires, causing the wires to part and two telephone poles to crash to the ground.

Although a fire alarm box was located within a block of the building, the watchman went to several homes in the vicinity in search of a telephone. He found a number of phones out of order due to broken wires. Considerable delay resulted before an alarm was transmitted.

The entire two-story corrugated metal structure was involved when the department arrived. Terrific heat from the burning building set fire to adjacent property, but this fire was quickly extinguished. A quantity of oil, which was stored in the building, flowed into the street, further complicating the work of the firemen. Chief Sid Hansen responded on the second alarm and took charge.

R. H. Wiley.

WHAT'S BURNING

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of November, 1937. These figures, compiled from the telegraphic reports, are based on estimates made at the time, and are subject to later investigations and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Month Ending November 30	Loss in Thousands of Dollars
Chicago, Ill.—Hellenic Orthodox Church of St. John the Baptist	50
Mount Vernon, Ohio—Business property owned by Woolson Bros. and Hull estate, destroyed	250
Long Beach, L. I., N. Y.—Apartment bldg. at 401 Magnolia Blvd.	50
Rochester, N. Y.—Plants of Lustre Chemical Co. and Hartman Fruit Co.	100
Sabine, Tex.—High school building destroyed	80
Belvedere, Cal.—Plant of Union Fish Co., damaged	275
Lodi, N. J.—Old Millbank Bleachery owned by Haggerty Corp.	50
Washington, N. C.—Moss Planing Mill destroyed	50
Evansville, Ind.—Plant of Burkert-Wallon Printing Co. destroyed	50
Midland, Pa.—G. C. Murphy Store and eight dwellings	250
Abbeville, S. C.—The De La Howe State School, 15 mi. from here	140
Grand Rapids, Mich.—Plant of Bradley Laundry Co. destroyed	80
Walnut Grove, Cal.—Property in Chinese section	100
Lowell, Mass.—Laurier Club on Merrimack St. damaged	50
Kingston, N. Y.—"Sports Heaven" property of Father Divine	200
Dearborn, Mich.—Warren Valley Golf Clubhouse destroyed	80
Cly, Pa.—Plant of National Roofing Mfg. Co. plant destroyed	140
Los Angeles, Cal.—Central Cabinet Mfg. Co. plant and adj. property	50
Ship Harbor, N. C.—Lewis Peg factory destroyed	65
Philadelphia, Pa.—Morris Weinrach store destroyed	50
Rockaway Beach, N. Y.—Bathing pavillion and adj. concessions	50
St. Jacques Le Mineur, Que.—R. C. Church destroyed	125
Boiling Springs, N. C.—Memorial Hall of Boiling Springs Junior College	50
Minneapolis, Minn.—Airways Radio service building at Wold-Chamberlain airport damaged	165
Ossining, N. Y.—"Laurel Hill," summer home of Major Bowes	80
Mapleton, Me.—Farm property owned by B. J. Hughes and Eurnern estate	50
Baker, Ore.—Pioneer Clarick Theatre destroyed	50
Peoria, Ill.—Plant of McElwee Packing Co. damaged	50
Grundy, Va.—High School building destroyed	70
Portage, Wis.—Marachowski department store destroyed	80
Salisbury, Md.—Montgomery Ward store and adj. property	50
Neenah, Wis.—Methodist Church and Wesley Hall destroyed	65
St. Charles, Va.—Roche Hotel and adj. business property	80
Annapolis, Md.—Carvel Hall Hotel damaged	80
Gallipolis, Ohio—Atwood Hall at Rio Grande, College, 13 mi. north	70
Danville, Ill.—Coach shop of Chicago & Eastern Illinois R. R.	275
Los Angeles, Cal.—Soule Mfg. Company property damaged	50
Jefferson City, Mo.—Capital City County Clubhouse, 5 mi. west	50
Kingman, Ariz.—Mill, tanks and bldgs. of Borianna Mine, 19 mi. south destroyed	80
Newport, Vt.—Business and apartment bldg. owned by Peter Handy	50

Montclair Riding Club Razed by Flames

Two homes, two stables, and a riding ring at West Orange, N. J., property of the Montclair Riding Club, were destroyed by fire. The owners, whose homes were destroyed, operated some of the best known academies in New Jersey, and a number of well known horses were stabled there. Photograph shows one of the homes totally destroyed and the fire spreading to another.

Montpelier, Vt.—C. H. & G. H. Cross, Inc., bakery and adj. property..... 65
Lynden, Wash.—Building occupied by Crescent Mercantile Co..... 50
West Salem, Ore.—Plant of Salem Box & Mfg. Co., and Copeland Lumber Yard.... 80
Mason City, Iowa—Business and apt. property on Federal Ave..... 125
Lake Charles, La.—Main bldg. of Swift & Co. plant damaged..... 50
Lexington, Mo.—Four business buildings on Main Street 80
Wortham, Tex.—Worth Theatre and Bounds building destroyed 50
Chicago, Ill.—Property occupied by Dixie Music House 50
West Orange, N. J.—Montclair Riding Academy owned by the Du Bois Brothers..... 65
Frankenmuth, Mich.—Several business establishments destroyed 80
Huntington, W. Va.—Store house of Chesapeake & Ohio R.R. shops..... 80
Omaha, Neb.—Seventh Army Corps area warehouse destroyed 65
Lewisburg, Pa.—R. S. Diehl garage destroyed 70
Bay City, Mich.—Rechlin Hardware Co. building destroyed 80
Birmingham, Ala.—Bldg. of Winter Paper Stock Co. destroyed..... 80
Los Angeles, Cal.—Property of Standard Battery Separator Co..... 90

FIRE ALARM COOPERATION BETWEEN TELEPHONE COMPANIES AND DEPARTMENTS

Report of George E. Morley to President Robert Bogan, of the International Association of Fire Chiefs, Giving Recommendations for the Improvement of this Service

GEORGE E. MORLEY was appointed by President Robert Bogan, of the International Association of Fire Chiefs, as a committee of one to confer with the officials of the Telephone Company as to the improvement of the service for the transmission of fire alarms over the automatic dial telephones. His report to President Bogan as to the result of his conference with the telephone officials and his recommendations for the improvement of this service follow:

Mr. Robert Bogan, President, International Association of Fire Chiefs and Members, in Convention, October 19-22, 1937, *at Oklahoma City, Okla.:*

GENTLEMEN: There is a general feeling in the fire service that the use of the public telephone for reporting a fire is not as dependable or its transmission from the fire alarm office to the different companies as satisfactory as those received and retransmitted over the conventional municipal signaling systems now in use, and it has been claimed that the introduction of the new automatic dialing systems has made them less reliable, although a properly transmitted and handled telephone alarm has certain advantages over the conventional box alarm.

In accepting the appointment as a committee to confer with officials of the Telephone Company, after it had been suggested that perhaps service over the automatic could be improved if the telephone company would designate a special signal digit on the dial to be used exclusively for fire calls and arranged that, when used, the operator would immediately know that it was a fire call and could give it special attention. The writer had several conferences with officials and engineers of the telephone company, and begs to respectfully submit for your consideration the following report.

The principal complaints that have been made against the use of the telephone for fire alarm purposes may be classified as follows:

1. That the circuits and operating equipment are not constantly supervised to insure continuity of service, and if in the excitement of discovering a fire and attempting to report it by telephone, the person chooses to look up the number, instead of calling the operator, considerable delay may be occasioned by darkness in finding the correct, and by chance calling the wrong number. If it happens to be a coin type phone and the sender is without a coin to operate it, further delay in the call is also had. If the calling party becomes excited in reporting the location of the fire, they may be misunderstood, particularly when names of so many streets sound alike, or the sender may leave the phone before giving any location at all.
2. That the method of retransmitting telephone alarms from the fire alarm office, or wherever they are received, to the different fire houses has not been as easy or satisfactory as the retransmission of box alarms.
3. That where adjoining separately incorporated municipalities are all served from the same telephone exchange, or where there is overlapping exchange service, alarms have been received by one municipality that should have gone to another, causing considerable delay before the alarm is received and responded to by the proper department.
4. It has been claimed that the telephone was unsatisfactory for fire department use in issuing general orders, for the reason that no positive record of the order could be made other than the sender's word against that of the receiver.

Suggest Figure O for Fire Call

In the proposition of setting aside a single dial digit to be used for fire or emergency calls, the telephone engineers claimed this would be hard to do for the reason that all of the numbers of the automatic dial are used for the beginning of an ordinary call, excepting No. 1 (which is impractical) and figure 0, which is now used to call the operator. They say that they could arrange to have a special emergency call of few numbers, but think this would slow up the service and be more confusing to the sender than the present figure 0 they have been educating the public to use for so long, for reporting a fire or other emergency. This I believe is correct, because figure 0 can be easily found in the dark, and the New York Telephone Company claims that frequent check-ups show that over 90 per cent of the emergency operator calls are answered in four seconds or less.

Handling Telephone Alarms

Classification 1: The excitement of the sender of an alarm of fire by 'phone is a hard condition to control, but it can be improved. Several years ago, when I had occasion to spend some time in a midwestern city fire alarm office,* I was greatly impressed with the way they handled telephone alarms. They had several trunk lines used for incoming fire calls only, which, when used, operated a special buzzer, signifying at once it was a fire call. The operators were specially trained to answer in a clear gentle manner, so as to keep the party on the other end of the line from getting excited and losing their head, saying: "This is the Fire Department. Do you want to report a fire?" After getting an affirmative reply, the operator then asks for the street, the number and what cross street or large building it is near, and lastly, "Can you tell me what is burning?" If the operator finds, for example, it is an automobile, he can use his judgment and send only one company.

In the meantime, the dispatcher, who had been listening in on the call with an extra set of head-phones, checks his understanding of the location with the operator, and having secured from his file a card, about 8 x 36 inches, which shows the entire length of the reported street, with all cross streets and building numbers, fire alarm boxes and sufficient phantom box numbers marked, is able to transmit a number on the fire alarm circuit that will send responding companies very close to the fire. As soon as the fire alarm operator finishes receiving the telephone alarm, having sent an advance warning, he immediately 'phones it to the first due company, and the other responding companies go on the signal received on the alarm circuit.

The New York Telephone Company recommends to subscribers of both the manual and automatic systems and print in their directory: "In an emergency, dial or call the operator and say: *'I want a policeman,' 'I want an ambulance,' 'I want to report a fire.'* If you cannot remain at the telephone, tell the operator where help is needed."

While it is claimed that the public 'phones requiring a coin to call the operator may have a tendency to discourage malicious false alarms, and that the chances of a person wanting to use a coin 'phone to report a fire, not having the proper coin or being unable to get someone nearby to supply it for him, would not happen very often, yet that it can and has happened is true.

In classification 2, where the claim that retransmission of telephone alarms to the fire stations was not as satisfactory as the retransmission of box alarms, may be correct, in the old way of handling them, it has been common practice in many cities in the past that a

*Tulsa, Okla.

telephone alarm of fire was retransmitted by telephone from the fire alarm office to the first company due in and the nearest street box or phantom number was sent out over the alarm circuit for the other responding companies. In some cases the first due company goes past the box struck on the alarm circuit, and drops a man to direct the other companies to the exact location of the fire, which is not good practice, as it may take the first due company a block or two from its most direct route to the fire and reduce the man power one man for the time being. Other cities take a chance that the other second companies following can find the location from the nearest box or phantom number struck on the alarm circuit. This, too, causes a loss of time, if you do not have a good fire alarm coverage and plenty of phantom locations.

A number of cities have worked out and installed voice amplification systems, and several manufacturers have recently developed and put on the market similar systems, that the fire alarm operator can immediately announce on every floor of every fire house, both box and telephone alarms, and if it is a telephone alarm, the exact location of the fire can be given as received. This is a great improvement over and much faster than old practice, if installed and used as recommended by the National Board of Fire Underwriters in their bulletin No. 38, on the use of voice amplification in fire alarm service, issued July 1, 1937.

Voice Amplification Systems Help

In classification 3, where municipalities have trouble getting correct telephone alarms where several communities are served from the same telephone exchange or have overlapping service, this condition may be improved if these cities so troubled would educate their public that if they have a fire and want to report it by telephone, to be sure to call the telephone operator and tell her that you want to report a fire to the (for example) Brookline Fire Department. This may be best accomplished if the Chief could cooperate with his local telephone manager and get his permission to let you attach a suitable card or medalion with a small beaded chain to telephone with printed or stamped instructions how to properly report a fire from that telephone.

Classification 4, where the telephone use for giving orders was not desirable on account of not being able to make a permanent record of the conversation, there are at least two companies who have developed portable recording instruments to be associated with the fire alarm telephone switchboard, that will record on a disc or wax roll every word spoken in a two-way telephone conversation which can be reproduced at will. Records can be made of all telephone fire alarms, and general orders issued and the records preserved for future reference. These machines are not expensive and are very dependable.

In 1895 there were about 350,000 telephones in use in the United States, and at that time nobody ever thought of using the telephone to report a fire, as most telephone offices opened at 8 a.m., closed at 10 p.m., with restricted hours on Sunday. It is estimated that there are about 18 million telephones in use now available 24 hours a day that can be used to report a fire and about 70 per cent of all alarms of fire in the United States are reported by telephone. This average will increase with the increased installation of telephones and until our fire alarm manufacturers can develop means to make their signal stations more convenient for public use and city officials induced to make the needed installations. Sufficient street boxes must be provided to take care of fires discovered by pedestrians, particularly at night, and extend the service to care for districts where telephones are not available.

Natural to Use 'Phone as Fire Alarm

The telephone has become such an important part of our daily lives for distant communication and the distribution of its instruments so general and use so common that the natural impulse is to use it to report a fire rather than start to look for the usually unknown nearest fire alarm box in a city lacking proper distribution of boxes that are not easily located and identified day or night. The advantage of a properly executed telephone alarm of fire over that of a box alarm is the time saved between locating the nearest telephone over that necessary to locate the nearest street box. The convenience of the telephone in the home and business, and the opportunity the fire alarm operator has of finding out what is burning that would allow him to send only one company to extinguish an automobile fire is evident, as he would avoid sending a fire boat, water tower, several trucks and engine companies, as he would have to do for that same automobile fire, had a box been pulled for it along the water front, and there is a less tendency to use the telephone for malicious false alarms.

A box pulled for fire, where there is a poor box coverage, may bring the responding companies a considerable distance past the fire, while a properly executed 'phone alarm could direct the companies direct to the fire.

How to Improve Telephone Alarms

The general efficiency of this large percentage of telephone alarms could be improved:

If officials would provide operators of the highest type, men who can take the initiative, and have them follow the plan of the midwestern city before outlined.

Provide sufficient special trunk lines for exclusive use on incoming telephone alarms, and follow the rules of the National Board of Fire Underwriters on telephone alarms, as recommended in their Red Book on municipal fire alarm systems, issued September 1, 1934.

Install a voice amplification system for retransmitting alarms from the fire alarm office to the different companies.

Install a recording system, that a permanent record can be made and retained for future reference of all telephone alarms received and voice amplification alarms and orders issued by telephone.

Educate the public to call the telephone operator, to make the connection, if they want to report a fire by telephone.

Be sure to have your local telephone directory give instructions how to report a fire by telephone, by calling the operator to connect them to the Fire Department, because when the telephone operator gets a call for the Fire Department to report a fire, she proceeds to make the connection as quickly as possible, and calls her supervisor, who stands close by, to help her in any way she can, and tries to trace the source of the call if the sender does happen to get excited and leave the 'phone before giving the location of the fire. But, as an extra precaution, have the number to call to report a fire listed under Fire Department; City of . . . . Fire Department; . . . Fire Department.

Telephone Company Ready to Cooperate

The writer found the officials of the Telephone Company conscious of the great number of emergency calls they are required to handle and are doing everything they can to give the best service they possibly can, and are glad to receive suggestions and anxious to cooperate with the International Association of Fire Chiefs to better this service. Before closing, I want to thank Harold M. Prescott, John B. Rees of the A. T. & T. Co., R. H. Hughes, Henry McIver, and Engineers of the New York Telephone Company, for their splendid spirit of cooperation in our conferences.

As it is the consensus of opinion that the gap of time is entirely too long between the start of a fire until the first alarm, I think a great amount of good could be accomplished if the Association would appoint a committee to make a study of the fire alarm subject this coming year and see what could be suggested that would improve the service and provide a better box distribution of the municipal systems, and with power to cooperate with the Telephone Company in improving their service, to report at the next convention.

Respectfully submitted,
GEORGE E. MORLEY.

Jersey Chiefs' Club Meets

The Paid Fire Chiefs Club of New Jersey held a meeting at St. Peters Club House, Newark, on Wednesday, December 1, to honor Chief George E. Koeber, recently retired from the Bloomfield, N. J., Fire Department.

In addition to being made an honorary life member, Chief Koeber was presented a gold mounted pen and pencil set, the gift of the members of the organization. Chief William O'Neill, of Weehawken, N. J., is President of the organization and Chief Charles A. McGinley, of East Orange, Secretary.

A talking film was shown, describing the making of rope as produced at the Plymouth Cordage Company, in North Plymouth, Mass. The applications of rope to the fire service were also shown. This film was widely discussed, questions being answered by representatives of the Plymouth Cordage Company and Capt. Moeller, of the Atlas Life Net Company.

The Club extended Honorary Life Membership to Commissioner John Keenan of the Newark, N. J., Fire Department and to Fred Shepperd, Editor of FIRE ENGINEERING.

The Club has been developed into a live, progressive organization, with practically all paid Fire Chiefs in the state as members.

PAXTON MENDELSSOHN PRESENTS AMBULANCE TO DETROIT, MICH.

Gift Made in Memory of Donor's Mother — Ambulance Makes First Run Ten Hours After It Is Placed in Service

By William Jerome Daly

THE Detroit Fire Department was recently presented with an ambulance costing $20,000, the gift of Paxton Mendelssohn in memory of his mother Lydia Mendelssohn and it replaces another Mendelssohn memorial ambulance, which was given to the Detroit Fire Department in June, 1927, but which is now destined to become a supply van, or possibly a floodlight wagon.

Ambulance Given by Paxton Mendelssohn to Detroit

The presentation was made on Friday afternoon, November 19, on the apparatus floor of Detroit's beautiful fire headquarters at Wayne and Larned. Due to illness Mayor Frank Couzens was unable to attend to accept the gift, but he sent City Councilman and City Clerk-elect Frederick Castator to represent him. The presentation was made before an admiring audience of city officials, fire department officials and medical staff, and members of Box 12 Associates, including visitors from other cities.

Description of the Ambulance

The Mendelssohn Memorial Ambulance is a Cadillac V-16, weighing 9,500 pounds, with a total length of 24 feet, 6½ feet wide and a wheel-base of 210 inches. It is a streamlined job, with low center of gravity and can travel faster than safety dictates that it should. It is air conditioned, hot or cold. When either the side or the rear door is opened in winter, the heat automatically switches on. It is equipped with roto-rays, bell and siren. The entire interior is stainless steel lined. Each side of the bus has three frosted non-shatterable glass panels, with sandblasted borders. The interior lighting is indirect. It has electric fans with unprotected rubber blades. Two stationary beds, with adjustable hospital frames and sponge rubber mattresses are on either side of the bus. Provision is made overhead each bed for a portable bed suspended from the ceiling, for stretcher cases, thereby giving the bus four beds in addition to folded army cots for emergency or field use. There is a sterilizer and other necessary medical and surgical equipment. On each side of the body, forward, is a modest size solid gold memorial plate containing the date and identifying the ambulance as the gift of Paxton Mendelssohn in memory of his mother. The deed of gift was approved by the Corporation Counsel of Detroit.

Although he needed no introduction, Mr. Mendelssohn was officially presented to Councilman Castator by Arthur Winter, President of the Fire Commission. Mr. Mendelssohn acknowledged the assistance and co-operation of the Ambulance Committee, which included Commissioners Winter and Murphy, Chief Walter F. Israel, Chief of Apparatus Edward Rumsey, and Dr. Glenn Stockwell, Chief Surgeon. He also recognized the participation of Ernst Shabera, of the Fleetwood plant of Cadillac Motors and of John Graham, of the Meteor Motor Car Company, Piqua, Ohio, who built the special body. In a few well chosen words, Mr. Mendelssohn said he was actuated by a desire to be of some benefit to the fire fighters of his native city. He then delivered the deed of gift and the keys of the ambulance to the Mayor's representative.

Mendelssohn Praised for Gift

Mr. Castator responded with praise of Mr. Mendelssohn for his genuine desire "to do something for someone else in sacred memory of your mother." He declared that Detroit wouldn't have a Fire Department ambulance if Mr. Mendelssohn had not given it one. He said the people of Detroit appreciated such public spirited citizens, and he added that every time the ambulance leaves its station, it will be driven out with the thought that it is on a mission of mercy and solace for the benefit of mankind.

Fire Commissioner Winter spoke in praise of the gift and its donor, and in accepting it, he gave the keys to Chief Israel and ordered the ambulance placed in service.

Chief David H. Williams, President of the Officers Club, Detroit Fire Department, presented Mr. Mendelssohn with a set of engrossed resolutions expressing the appreciation of the members of the club.

Dr. Harry M. Archer, Honorary Medical Officer, New York Fire Department, presented to the Detroit Department a Thomas convertible splint for leg fractures. It was made by Fireman John J. Delaney, chauffeur of the N. Y. F. D. ambulance. In making the presentation Dr. Archer, a veteran of the medical side of fire-fighting service, declared the Detroit ambulance the most modern vehicle of its kind in fire service. He said the Detroit Fire Department was fortunate in having a friend such as Mr. Mendelssohn. Then he fraternally said that the best ambulance in the world isn't much good without an efficient medical staff to man it. The ambulance had its first run within ten hours when Pipeman James H. Jones, Engine 58, was seriously injured. He

Presentation of Ambulance to Detroit

Left to right, Paxton Mendelssohn, donor of the ambulance; Councilman Frederick Castator, representing the Mayor; Arthur Winter, President, Fire Commission, and Chief Walter Israel, Detroit.

Celebration of Box 12 Associates To Honor Ambulance Presentation

Seated, left to right, Ex-Chief Stephen DeMay; Wm. Jerome Daly, New York City; Fire Commissioner C. Hayward Murphy; Dr. Harry Archer, N. Y. F. D.; Paxton Mendelssohn; Fire Commissioner George Trendel; Chief of Police Brigadier-General Heinrich Pickert; Robert Anderson, Vice-President, Buckeye Iron and Brass Works. Standing, Harry Shearer, Secretary of Box 12; Mel Lanphar; Robert Morris; Paxton Mendelssohn, 2nd.; I. Herbert Case, General Manager, FIRE ENGINEERING; Bill Scripps; Richard Reaume, Secretary, Fire Commission; Robert Loughead, Treasurer, Box 12; Chief Walter Israel; Gayard Lafer: Lieut. George Smith, Chief of Arson Squad; Ned Wright; Eddie Sanderson (peeking over shoulders); Jack Sutton, Fire Commissioner of Grosse Pointe; Stewardt Fitzgerald; Chief Edward Rumsey, Superintendent of Apparatus; Gordon Graham; Ernst Schebera; Phil Boorn; William Van Husan Moore; J. Bell Moran; Gil Waldo, and Moore Meigs. Also present, but not in the photograph, were John Graham, Meteor, and former Commissioner Bill Chittenden, now of the Book-Cadillac Hotel.

was run down by a motorist while uncoupling hose in the street where his company had previously extinguished a fire.

Box 12 Celebrates

Detroit fire fans made the presentation of the Mendelssohn Memorial Ambulance the occasion for holding their annual dinner-meeting, because Mr. Mendelssohn is "Chief" of Box 12 Associates of the Motor City. The dinner was in the Book-Cadillac Hotel Saturday night, November 20, and was the best attended meeting of the year. The speakers included Fire Commissioners C. Hayward Murphy and George W. Trendle, I. Herbert Case, General Manager of FIRE ENGINEERING, Police Commissioner Heinrich Pickert, Robert Anderson, President of Box 7 Association of Dayton, Ohio; Dr. Harry M. Archer, the "Janitor" of the New York Firemen's Cycle Club; Chief Walter Israel, former Chief Stephen De May, Deputy Chief Edward Rumsey, and Wm. Jerome Daly.

Mr. Mendelssohn was toastmaster. Telegrams were read from Fire Commissioners Arthur Winter and Nate Shapero and also from Charles Gauss, State Fire Marshal. The theme of the evening was what "Chief" Mendelssohn had done for the fire fighters of Detroit. Dr. Archer told him that he had done a wonderful thing for humanity.

WM. JEROME DALY.

New York City Tests Floodlights

New York City has two new flood light trucks. They were tested at the City Hall on the night before Thanksgiving Day. The test was made for the benefit of Mayor La Guardia and a multitude of homeward bound New Yorkers, who tarried long enough to be late for dinner, but to enjoy the spectacle. John McElligott, Fire Chief-Commissioner, was in charge of the test. Herman Kuch, Acting Battalion Chief in charge of apparatus and shops, was the technical director.

The two trucks are Ward-LaFrance make and each cost $7,524. They resemble a New York rescue wagon generally, and they have a chauffeur's cab. Each vehicle is a six-cylinder, 80 horse power apparatus, with shaft transmission and convertible gears connecting the motor to a 10 k.w. generator, 110 volts at 1,500 motor r.p.m. Each truck contains two floodlights of 1,000 watts each, four lights of 500 watts, and two lights of 250 watts. There is a master light with a 1,500 watt lamp and an estimated reflection of 1,900,000 candle power.

This master floodlight is mounted in a sliding shaft behind the chauffeur's cab and it can be hydraulically raised 32 inches above the top of the cab in order to swing it completely in an unobstructed arc.

The trucks carry two reels of cable of 500 feet each, one reel of 300 feet, and eight reels 100 feet. The latter are portable. The road test, as provided by the contract, was held December 1.

These two floodlight trucks are the first modern searchlights the New York Department has purchased in over thirty years. The old style carbon lights were mounted on a hard rubber tired engine drawn by two horses.

Searchlight engines in New York for the past twenty years have been gifts. Four of them, two at a time ten years apart, were presented to the City and to the Fire Department by William F. Kenny in memory of his father, Battalion Chief Thomas A. Kenny, a famous fire fighter in the Third Battalion, forty years ago.

The demonstration at the City Hall on Thanksgiving eve lasted from 6 until 9 o'clock. Mayor La Guardia attended the test for about an hour. To show him the contrast between the old and the new, Commissioner McElligott tapped in a special call from the alarm box at Park Place and Broadway, which is on the southwesterly edge of the park. The signal was 18—105—1, calling Searchlight No. 1 from its station, four blocks away. Using the cupola of the City Hall for a target, the new light illuminated one side of the dome and the old light the other side of the dome. Needless to say the new light outshone the old one considerably. The Mayor was well pleased.

New York has been badly in need of floodlight apparatus, recently, due to traffic accidents to two of its four searchlight engines. Light No. 4 in the Queens Borough territory has been out of service for the past four years. Several weeks ago, Searchlight No. 2, in the Brooklyn district, was in a collision and is still in the shops.

WM. JEROME DALY.

"Emergency Plan" Idea Spreads to Litchfield County, Conn.

On Monday evening, November 22, a meeting preliminary to the organization of a Fire Chiefs' Emergency Plan in Litchfield County, Conn., was held at the New Milford Firehouse. Twelve towns and cities out of a possible 16 with fire protection in the county were represented and heard a group of speakers from Fairfield, New Haven and Middlesex Counties, Connecticut, and Dutchess County, New York, explain the many advantages of forming such an organization.

Chief Lynn Deming, New Milford, welcomed the visiting officers and announced that ex-Chief Bernard Scully, Westport, President of the Fairfield County Fire Chiefs' Emergency Plan, would preside. Ex-Chief Scully then called for the election of a temporary Chairman. Chief John Griffin, Norfolk, was nominated and elected.

Ex-Chief Scully discussed the constitution and by-laws of the Fairfield County Plan, relating its preamble, membership regulations, duties of its officers and the committees needed for the Plan's operation.

Chief John Morehouse, President of the Mid-Hudson-Harlem Valley Fire Chiefs' Association, discussed the advantages of a county organization from the viewpoint of Mutual Aid and related his experiences as Chief of the Brewster, N. Y., Fire Department before the organization of the association in Dutchess and Putnam Counties.

Chief Henry Drake and Chief Harry Klein, the former of Clinton Corners and Secretary, and the latter of Hope Farm and Treasurer of the Mid-Hud-

son-Harlem Valley Association, discussed cooperation between New York and Connecticut and the need of laws, to guarantee Fire Departments crossing the state line protection in case of a mishap. They also discussed mutual aid and Chief Klein reviewed the system his county had taken in mutually aiding the various Fire Departments in case of an emergency.

Chief John Pachl, President of the New Haven County Fire Chiefs' Emergency Plan, urged the cooperation of all the companies in the county to make an organization possible.

Chief Michael Lawton of Middletown, President, Chiefs' Club of Connecticut, stressed the need of fire companies selling themselves to the general public and said that a county group could exchange numerous ideas towards this end as well as in actual fire-fighting methods.

Ex-Chief George Brencher, Darien, Treasurer of the Fairfield County Plan discussed the legislative ideas that the Plan had fostered during the past few years, and urged a strong county organization in each county to gather ideas for legislation to be presented as one body to the state legislature. He discussed the 2 per cent tax on insurance policies, and how it works in New York State, the paid and volunteer driver's liability bill and the New York State Firemen's Home at Hudson, N. Y. He related how the Plan's original bill to protect drivers had been drastically revised in committee until the Plan had to "kill the bill."

Capt. William Russell, First Vice-President of the New Haven County Plan, presented a chart of the population, acreage, grand list and number of men in Litchfield County. His figures showed a population of 71,449 in the county, 16 fire departments, an acreage of 363,758, a grand list of $159,493,191 and a crew of 706 men. These figures only included towns where there were Fire Departments.

Herman Hall, head of the State Board of Education, discussed the Regional Drill Schools. Leon R. Meaney, Greenwich, Chairman of the Fairfield County Educational Committee, reviewed the various instructive lectures and demonstrations which the new organization could obtain without much expense.

Others heard during the meeting were Retired Chief Peter Beckerle of Danbury, Third Vice-President, Fairfield County Plan, and Chief Louis Goodman, Torrington.

Capt. John Moehring, Secretary of the Fairfield County Plan, was Acting Secretary during the meeting. The next meeting, at which election of officers will take place, is scheduled for Torrington on December 3. A vote of thanks was extended to Chief Deming, and the New Milford department for hospitality.

* * *

Electing Chief John H. Griffin, Norfolk, as its first president, an organization meeting was held in fire headquarters at Torrington, Conn. on Friday evening, December 3. Other officers elected were: First Vice-President, Chief Lynn Deming, New Milford; Second Vice-President, Chief Robert Henderson, Thomaston; Third Vice-President, Chief William Mow, Sharon; Secretary, Capt. Wesley Billings, Thomaston; Treasurer, Allyn Fuller, Canaan; Board of Directors for two years: Chief Edward Goodman, Torrington; Chief C. J. Carrigan, Terryville; Chief Ray Palmer, Watertown and Capt. Winton B. Rodgers, Falls Village. For one year: Chief Daniel McPherson, Winsted; Chief Kenneth Kaylor, Washington; Chief Harry Kilborn, Bantam and Chief Albert Edwards, Kent. Assistant Foreman Theodore Vail, Winsted, was appointed press representative, while Assistant Chief Thorton McCleary, Watertown, Chief F. E. Tuttle, Woodbury, and Deputy Chief Ellis Silvernail, Norfolk, were appointed the Plan's first Membership Committee. Forty-one members were elected to membership during the evening.

Speakers during the evening were Mayor William Patten, Torrington and Chief E. J. Goodman, who welcomed the visiting Chiefs and officers to that city, as well as Chief Michael Lawton, Middletown, President, Connecticut Chiefs' Club, Chief John Pachl, President, New Haven County Fire Chiefs' Emergency Plan, Deputy Chief Harris, Meriden, Captain William Russell, Waterbury, Vice-President in the New Haven Plan and Leon R. Meaney, Greenwich, Chairman of the Ways and Means Committee, Fairfield County Plan, who aided in the preliminary plans in formulating the new association, and who was temporary Chairman.

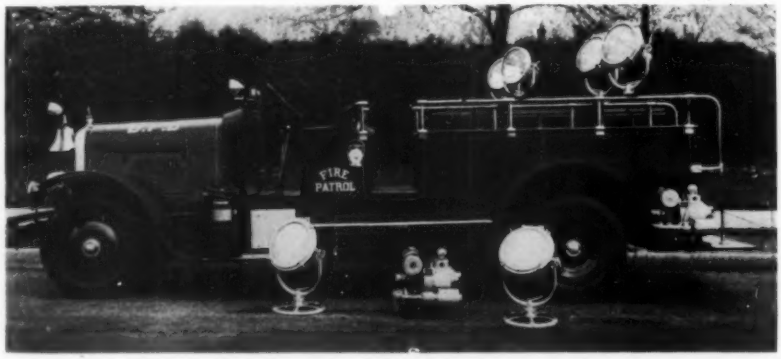
The following meeting places were decided upon for future meetings: January 10, Falls Village; February 14, Washington; and March 14, Watertown.

Dayton Has Fire Patrol Unit

Headed by Richard S. Fowler, a group of business men of Dayton, Ohio, presented the Fire Department with a fire patrol unit containing 112 pieces of emergency and first aid equipment.

Some of the items carried are six floodlights, two portable generators for the lights, five hundred feet of lighting cable; equipment for water rescues, stretchers, asbestos and rubber gloves, blankets, two hydraulic jacks, ladders, fire extinguishers, first aid kits, etc.

The car has a regular police-fire WPDM receiver as well as a two-way radio transmitter.



Fire Patrol Unit Presented by Local Business Men to Dayton, Ohio

Akron Stages Novel Display

At the Oklahoma City Convention of the International Association of Fire Chiefs, the Akron Brass Company, of Wooster, Ohio, staged a very novel exhibit. Among the fire department first aid equipment manufactured by the Akron Brass Company is a line of tannic acid equipment for burns.

Stationed at the Akron booth was a Red Cross nurse, who rendered first aid to the delegates at the Convention and their friends. A very effective demonstration was made when one of the visitors received a scald from hot coffee and was promptly and effectively treated with tannic acid spray. The Akron Brass Company also had on display many of their large line of fire department appliances.

N. E. Directors to Meet

A special meeting of the directors of the New England Association of Fire Chiefs will be held at the Parker House, Boston, December 15, in conjunction with the meeting of the Fire Chiefs' Club of Massachusetts. The purpose is to select the date of the annual meeting.

Windham and Tolland Firemen Hear About Legislation

At a meeting of the Windham and Tolland County Firemen's Association, at Woodstock, Conn., on November 18, the two per cent insurance tax in Connecticut, the drivers' liability bill, and the State Firemen's Home at Hudson, N. Y., were described by Ex-Chief George Brencher, Darien, and Captain John Moehring, Stamford, respectively, Treasurer and Secretary of the Fairfield County Fire Chiefs' Emergency Plan.

Xmas Party for Chiefs

The annual Christmas Party of the Fire Chiefs' Club of Massachusetts is to be held at the Parker House, Boston, Wednesday, December 15 at one in the afternoon. The party will include a dinner, gifts for the ladies, and professional entertainment. Early registration is requested by the Secretary, William H. Hill, Fire Headquarters, Belmont, Mass.

Hammond Chief of Manchester

Richard A. Hammond has been appointed Chief of Fire Department in Manchester, Mass., to succeed the late Chief Manuel S. Miguel.

HARRY BELKNAP.

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WITH FLASHING BEAM OF LIGHT

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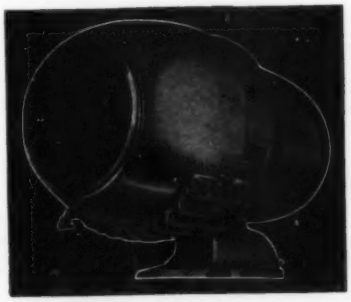

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1. Newest innovation a two-tone blast.
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Write for Trial Offer NOW

SPECIFICATIONS

Model	"77"
Finish	Chrome
Voltage	6 or 12
Dimensions	15½" long × 8¼" high
Net Weight	22¾ lbs.
Brackets	Pedestal or Roof

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Greater ECONOMY *Better* PERFORMANCE

Barton Pumps have revolutionized fire fighting. They have made it possible for small towns and villages to have first-class pumping apparatus—pumpers equal in speed, performance and dependability to anything found in the large cities. ***And at a price practically any community can afford.***

First, the Barton Fire Pump itself is not expensive. By advanced engineering we have accomplished wonders at low cost.

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Yours very truly,
R. A. POWELL, Chief
Pierre Fire Dept.
Pierre, South Dakota

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AFTER all, a good badge is a sensible investment. Not everyone can wear a fireman's emblem of service. You men who have devoted your lives to saving life and property should be proud of your badge.

You will be if you wear a BRAXMAR BADGE. Over fifty-five years of experience goes into every badge you buy.

Catalog on request.

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BRAXMAR BADGES

Standard for Over Fifty-Eight Years

Manufacturers' Announcements

Carroll on Board

W. J. Carroll, President, Rockwood Sprinkler Company, was elected to the Board of Directors of the Gamewell Company.

Mr. Carroll was associated with the Gamewell Company for fourteen years before joining the Rockwood Company, and had served during that time as pub-

© Bachrach

W. J. Carroll

licity Manager, sales representative of the New England office, and later General Sales Manager. His next advance was President of the sprinkler company.

Portable Generators

An illustrated folder has been issued by the Homelite Corporation, 140 Riverdale Avenue, Port Chester, N. Y., to describe and illustrate their complete line of portable floodlighting units, pumps, blowers and compressors.

Calcium Chloride

Solvay Sales Corporation, 40 Rector Street, New York City, has issued a twenty-two page illustrated booklet. It illustrates the use of fire pails and barrels in locations where such equipment is necessary and points out the value of Solvay calcium chloride for use in making up solutions for these pails.

Fire Hose and Fire Fighting Equipment

Eureka Fire Hose, Division of U. S. Rubber Products, 1790 Broadway, New York City, has issued a spiral bound, ninety-four-page illustrated catalogue which presents their line of fire hose and fire-fighting equipment. It has a number of photographs showing the manufacture of fire hose. The book also has data on the care of fire hose, and hydraulic data on fire streams.

Modern Magic

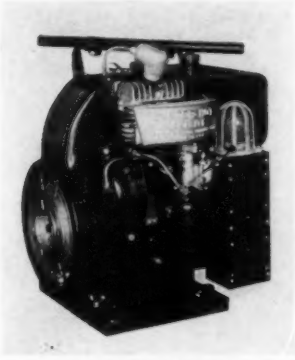
The Rockwood Sprinkler Company, 38 Harlow Street, Worcester, Mass., has had prepared a three-reel 16 mm. sound motion picture on "Modern Magic in Fire Protection." It shows the advance that has been made in fire protection engineering, and contains considerable information on automatic fire control. The reels require twenty-nine minutes for projection, and a showing may be arranged through local representatives of the company.

Portable Floodlight Generator Plant

A new portable floodlight generator plant known as the Genalite has just been announced by the American-La-France-Foamite Corporation, Elmira, N. Y. It is a sturdy, compact, dependable plant of conventional construction. It operates at a comparatively low speed and has a very high output for its size and weight. Four powerful floodlights can operate from it continuously. It has been designed and built exclusively for Fire Department service.

LaFrance Floodlight

The main features of the Model 12 Genalite are 1,250-watt, 110-115 volt d.c.; continuous duty, single cylinder, air cooled, 4-cycle engine; easy starting; full forced feed lubrication by pump; powerhouse type 4-pole flat compound wound generator; pilot light; built-in magneto; automatic speed governor; four outlet receptacle box designed especially for water tight connections; shock absorbing running board mounting; completely housed ignition system with a metallic shielded high tension cable leading to a metal enclosed spark plug.



The Genalite

The company also announce that they can furnish portable floodlights of 200 to 500-watt capacity. Also heavy duty waterproof cable and connections.

Wants Fireboat

The Commercial Club of Ballard, Wash., is furthering action for a fireboat for the Ballard, Lake Union, and the Lake Washington Ship Canal areas in Washington. The City Council has been petitioned to have a fireboat in that section as it is believed that the lack of proper fire protection is retarding the commercial development of the sections.

A Correction

In the account dealing with the meeting of the Fairfield County Fire Chiefs' Emergency Plan, appearing on page 609, November issue, the heading of the article was misleading. The four visiting Chiefs were not from Westchester County, but were from municipalities in Dutchess and Columbia Counties, N. Y., and represented the Mid-Hudson-Harlem Valley Fire Chiefs' Association. The Firemen's Home is situated at Hudson, N. Y.

CORRESPONDENCE

Credit Where Credit Is Due

To the Editor:

This is an expression of gratitude and appreciation to the officers of the International Association of Fire Chiefs, for their part in making our Convention a success.

Especially, do I thank Chief Ray Tiller for his fine work in making the exhibits a success, and to Mr. Morley for his aid in helping us not to overlook the many details.

Thanks also to the speakers who made our meetings interesting and informative; to all of the exhibitors for their cooperation in showing us the latest in the various types of equipment and apparatus; and, particularly to V. C. Stanley, President of the Gamewell Company, for their entertainment, and hospitality which filled in a large place in our program; to E. B. Reynolds of the American-LaFrance and Foamite Industries for his company's cooperation in furnishing the foamite for us to extinguish our oil fire; to the Wilson Packing Company for their part in our barbeque; to Howard Greene for his part in shooting out the gas well fire; to Bill Thimer, State Fire Marshal, Chris Schwab, E. E. Scott, Capt. Frye, and many others who so diligently assisted us.

Last but not least, I want all of you to know that the whole personnel of the Oklahoma City Fire Department with their characteristic ingenuity are responsible for the success of the convention, especially my chief officers, each of whom had a definite part that was his responsibility. These are First Assistant Chief G. R. McAlpine; Second Assistant Chief G. G. Leech; Deputy Chief J. J. Lynn; Deputy Chief Luke Chenoweth; Deputy Chief J. P. Carter; Fire Warden Geo. F. Ross; Electrical Superintendent Elmer Davis; Master Mechanic A. H. Paine.

Yours truly

GEORGE B. GOFF,
Chief of Fire Department,
Oklahoma City, Okla.

New Ladder for Gloucester

Chief Homer R. Marchant, Gloucester, Mass., has placed in service a new Pirsch 85-foot aerial ladder truck. A demonstration of the new apparatus was held on November 27.

HARRY BELKNAP.

Chief Tierney Dined by Town

Chief Daniel B. Tierney, Arlington, Mass., was the guest of honor at a dinner given by the past and present Selectmen and members of the Board of Public Works of Arlington, to mark his recent election to the presidency of the International Association of Fire Chiefs, and his fortieth year with the Fire Department.

Three hundred guests were present, including Stephen C. Gerrity, State Fire Marshal, and Selden R. Allen, Brookline, past-President, I. A. F. C.

Chief Tierney was presented with a solid gold badge, suitably inscribed, in which was set a diamond, and Mrs. Tierney was given a beautiful boquet of flowers.

CONVENTION DATES

Dec. 15—FIRE CHIEFS' EMERGENCY PLAN. Next Meeting, Fire Headquarters, Pelham Manor, N. Y. Secretary, Captain Howard Geer, Fire Headquarters, Rye, N. Y.

Dec. 15—FAIRFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Bethel, Conn. Secretary, Captain John Moehring, Toms Road, Stamford, Conn.

Dec. 15—FIRE CHIEFS' CLUB OF MASSACHUSETTS. Christmas Party, Parker House, Boston, Mass. Secretary, William H. Hull, Belmont, Mass.

Dec. 21—NEW HAVEN COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Fire House, Allington Fire Department, West Haven, Conn. Secretary, Chief Edward Pracny, Wolcott, Conn.

Jan. 10, 1938 — LITCHFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Falls Village, Conn. Secretary, Captain Wesley Billings, Thomaston, Conn.

Jan. 26, 1938 — FAIRFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Fire Headquarters, Stamford, Conn. Secretary, Captain John Moehring, Toms Road, Stamford, Conn.

Feb. 14, 1938 — LITCHFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Washington, Conn. Secretary, Captain Wesley Billings, Thomaston, Conn.

Feb. 23, 1938—FAIRFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Norwalk, Conn. Secretary, Captain John Moehring, Toms Road, Stamford, Conn.

March 14, 1938—LITCHFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Watertown, Conn. Secretary, Captain Wesley Billings, Thomaston, Conn.

March 23, 1938—FAIRFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Trumbull, Conn. Secretary, Captain John Moehring, Toms Road, Stamford, Conn.

June 16-18, 1938—EASTERN ASSOCIATION OF FIRE CHIEFS. 11th Annual Convention, Baltimore, Md. Secretary, Chief Charles E. Clark, P. O. Box 217, Wayne, Pa.

June 21-22, 1938—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. 4th Annual Convention, Boulder, Col. Secretary-Treasurer, Chief Ray Tiller, Waterloo, Ia.

June 29, 1938 — FAIRFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN — Regular Meeting, Redding, Conn. Secretary, Captain John Moehring, Toms Road, Stamford, Conn.

Aug. 8-12, 1938 — PROVINCE OF QUEBEC POLICE AND FIRE CHIEFS' ASSOCIATION. 6th Annual Convention, Sherbrooke, Que. Hon. Secretary-Treasurer, Chief Robert Harrington, Fire Dept., McColl-Frontenac Oil Co., Ltd. Suite 8, Hotel Windsor, Montreal, Que.

Oct. 4-6, 1938—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. 59th Annual Convention, Lebanon, Pa. Secretary, Chief Charles E. Clark, P. O. Box 217, Wayne, Pa.

Oct. 18-20, 1938—ILLINOIS FIREMEN'S ASSOCIATION. 51st Annual Convention, Père Marquette Hotel, Peoria, Ill. Secretary, Asst. Chief Roy W. Alsip, Champaign, Ill., or Chief Frank Hazzard, Peoria.

Pacific Coast Chiefs Host to Chief Traeger

Much has been written about southern hospitality, but Chief and Mrs. Treager and party of Minneapolis know that the Pacific Coast has a brand of welcome that just oozes with sincere friendship.

At the I.A.F.C. convention held in Oklahoma City, he told Jay Stevens that he was going to make a trip to California. Things were soon arranged.

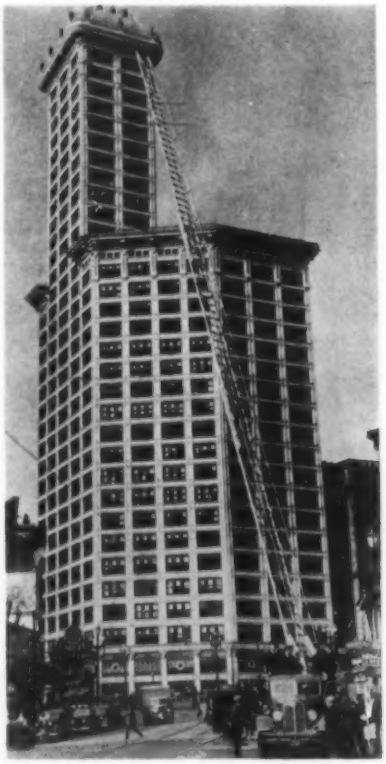
When Chief and Mrs. Traeger and daughter, and Capt. and Mrs. Roy E. Quady reached Los Angeles, they were the guests of the Los Angeles County Chiefs and their wives at a dinner. Chief Ralph J. Scott took charge of their tour of Los Angeles and showed them the studios. One of Chief Stevens' deputies met the party at Monterey and escorted them through the Big Trees, to a dinner meeting at San Francisco. Here they were guests of the Northern California Chiefs and their wives. Chief Brennan escorted them over the new bridges, through Chinatown and about the city. After ten days of sightseeing they left for Sacramento where Chief Dunphy met the vistors.

They returned by way of Reno, and since press dispatches have not advised otherwise, it is assumed that the matrimonial status of the couples remains the same.

In Defense of Sudbury

A story appeared in the August issue of FIRE ENGINEERING regarding a humorous event supposed to have taken place at Sudbury, Ont. In the November issue, a letter appeared by Chief Andrews of Sudbury, in which he took objection to the item and gave the correct facts.

The article was not written by John Karl Lee over whose signature it appeared, but was given to him by an official of one of the largest Toronto daily newspapers. The story appeared in several issues of that paper for one day exactly as printed in FIRE ENGINEERING. Mr. Lee hopes that Chief Andrews and his department will realize that no slight was intended.



Pictures Can Deceive

At first glance, one might receive the impression that this aerial ladder reached the thirtieth floor of the office building in the background. Of course, this is an illusion. The illustration shows the new 100-foot Seagrave aerial ladder recently delivered to Seattle, Wash. during a demonstration. The picture was taken a block away from the Smith Tower Building, which forms the background.

Ex-Chief Shaller Honored

Frank J. Shaller, who recently retired as head of the Fire Department at Port Huron, Mich., was the guest of honor at a banquet held in No. 1 Fire Hall. He joined the department forty-six years ago and has been Chief for the last thirty-two years.

His post will be filled by Assistant Chief Hissock, who joined the department in 1907 and has been Assistant Chief since 1935.

Chief Corrigan Marks Anniversary

Fire Commissioner Michael Corrigan, Chicago, and Mrs. Corrigan went to see a performance of "Aida" on the opening night of the present Chicago opera season. But to them it was more than a musical enjoyment. It marked the anniversary of a disaster that he prevented twenty years ago.

At that time he was a Battalion Chief. The auditorium was filled with 3,700 persons who came to hear Galli-Curci. He was standing in the rear when he saw a slight flare under a row of middle seats. He ran down the aisle and heard a fuse sputtering. He pushed some people away, and had a time with a woman who resented his intrusion.

He picked up a bomb, caught its fuse near the cap and snuffed it out. Wrapping his coat around the bomb, he rushed out of the auditorium with it. Galli-Curci sensed that something was wrong and sang the "Star Spangled Banner" to quiet the audience. Chief Corrigan mounted the stage, and said that some one had dropped a lighted cigarette. The opera continued.

For this act of bravery he was awarded the Lambert Tree medal, which he again won in 1927.

20 Tons Moved To Save a Life

Firemen from Lowell, Billerica, and Chelmsford, Mass., with floodlights and emergency tools, waged a twelve-hour battle to shovel away twenty tons of sand and save the life of Manuel Camacho, a workman, who had been caught by a cave-in at a gravel pit on Russell Mill Road in Chelmsford. Chief Ernest N. Bartlett, Billerica, Chief Wilhelm Johnson, Chelmsford, and Captain Joseph Malone, Lowell, directed the rescue operations.

HARRY BELKNAP.

Department and Other Reports Received

Underwriters' Salvage Corps, St. Louis—Sixty-second annual report, Underwriters' Salvage Corps, St. Louis, Mo.; eleven pages.

South Dakota Fire School—Program of the eighth annual Fire School and fifty-third annual convention of the South Dakota State Firemen's Association held at Pierre, S. D.; seventy-two pages.

Presenting The AKRON DROP-FORGE COUPLING

Added Strength Without Added Weight

Note the raised bands and how they protect the swivel against any possible injury.

In hose couplings, drop-forging has an advantage in that the greater density of metal gives increased tensile strength without adding to the weight.

The Akron drop-forged coupling can be given any expansion. If flattened, it can be straightened without cracking. Raised bands on the coupling safeguard the swivel against damage.

This new addition to the Akron line is already finding favor in many fire departments that have tried it out. Let us tell you more about it.

AKRON BRASS MFG. CO., INC.
WOOSTER, OHIO

Manufacturers of Quality Fire Fighting Appliances

FREE TO FIRE CHIEFS

Fire chiefs who are seeking increased appropriations for more fire alarm boxes or fire fighting equipment may help their cause by furnishing the Mayor of their city a copy of

"INFLATION AND FIRE CHIEFS"

by ROGER W. BABSON as it appeared in FIRE ENGINEERING for February, 1937. Copies will be sent free to any chief who writes:

BABSON'S STATISTICAL ORGANIZATION, INC.
By ROGER W. BABSON, *President*
Babson Park, Mass.

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Are the World's Finest!

100% Waterproof, Durable and Flexible, made of VANITEX, a special Acid-Proof, Soft, Pliable material, manufactured exclusively for MIDWESTERN. This is the only firemen's coat equipped with the Famous SAFETY SNAP that can be instantly fastened or unfastened with one hand, and will not catch on clothing. See one of these superior coats before buying any other. You'll pick MIDWESTERN!

BEWARE OF IMITATIONS

Look for the double eagle label on the coat you buy.

Write for our Free Illustrated Catalog showing complete line of our rubber and canvas garments.

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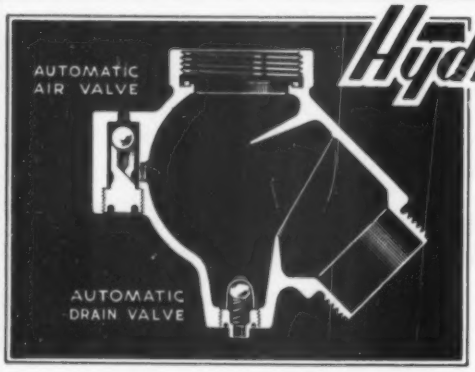
Midwestern Manufacturing Company
MACKINAW, ILLINOIS
Manufacturers of a Complete Line of Quality Firemen's Clothing



Hydrolator

The HYDROLATOR is a device that will automatically permit the escape of water resulting from leaky stand pipe valves.

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APOLLO MAGNETO CORPORATION, Kingston, N. Y.
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150,000 FEET *on one order*

and every foot passed rigid tests and inspection without a single rejection

Specify QUAKER FIRE HOSE

on your next order and be sure of that greater protection when working under pressure

QUAKER CITY RUBBER CO.

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COMFORTABLE AS YOUR OLD FELT HAT: WON'T SHAKE OFF

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DESIGN - - MATERIALS - - CONSTRUCTION
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444 LAFAYETTE STREET - Established 1836 - NEW YORK

CRACKERJACK FIRE HOSE

The hose with an unsurpassed reputation for QUALITY and SERVICE that has made it the STANDARD OF THE WEST for over 25 years.

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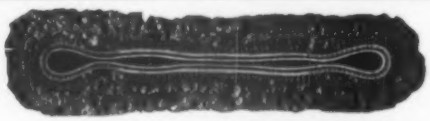
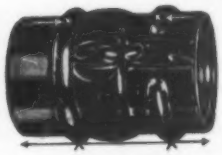
OAKLAND, CALIFORNIA
Dealers in All Parts of the Country



This is the new LIGHT WEIGHT
BI-LATERAL FIRE HOSE



This hose will stand 900 pounds pressure and weighs but 45 pounds to the section uncoupled.

Here's the new DROP-FORGED rocker lug coupling (not cast bronze), with the swivel-protecting feature.

This coupling will stand several expansions and can be used over and over again, saving your city at least 20c to 30c per foot on future hose purchases.

When in the market, let us show you that we can give you the best service obtainable for the least money.

BI-LATERAL FIRE HOSE COMPANY
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MOTOR FIRE APPARATUS
WATEROUS PUMPS
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Automatic — Supervisory — Manual

544 IRANISTAN AVENUE
BRIDGEPORT, CONNECTICUT

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

Algebraic Woes

Police will have to be blamed for the algebraic woes of applicants for posts in the Cleveland, Ohio, Fire Department.

Laurence Y. Young, Secretary, Civil Service Commission, said that police applicants made poor showings, and so when Fire Department applicants are examined, they will be asked to solve problems in algebra, and answer questions concerning government and science.

Fire Chiefs' Club Meets in Boston

Thomas F. Dougherty, former Assistant Chief of the New York Fire Department and present head of fire protection for the New York World's Fair of 1939, was a guest at the luncheon and meeting of the Fire Chiefs' Club of Massachusetts, held in the Parker House, Boston, on November 17. Another visitor was Battalion Chief Harold Burke, Commander of the Marine Division, New York Fire Department.

Chief William C. Mahoney, Peabody, presided. The principal speaker was Captain A. A. Nickerson, Texas Company, who told of the hazards of oil plants and refineries, and of the protection that is furnished by the companies. He expressed appreciation for the aid given to the plants' private fire brigades by municipal departments at large oil fires.

HARRY BELKNAP.

Against Fire Rate Schedule

The special committee on insurance revision of the Plymouth County, Mass., Foresters' Association has sent the following circular letter to all Fire Chiefs in the state:

"As you no doubt are aware, the New England Insurance Exchange in establishing fire insurance rates does not allow credit to cities and towns in which pumping units of less than 500 gallons per minute capacity are maintained, and it also penalizes risks which are located at a greater distance than two miles from a fire station.

"Believing that with the universal adoption of motor apparatus, and in view of the risks involved, a hardship and unnecessary expense is placed upon many cities and towns to meet the requirements of the exchange, the Plymouth County Foresters' Association has appointed a committee to contact the fire protection, municipal and civic agencies in an effort to arouse public sentiment to a point where the New England Insurance Exchange will reconsider its present requirements in respect to the above matters.

"The enclosed resolutions are self-explanatory and the committee urgently requests that you secure the adoption and signature of one copy by your Board of Selectmen or Mayor and that the other copy be signed by yourself as Chief of the Fire Department and both copies be sent to the New England Insurance Exchange, 40 Broad Street, Boston, Mass.

Signed: MELVIN B. SHEPHERD,
"Chairman of Committee."

The resolutions read as follows:

"Whereas it has come to the attention of this organization that the New England Insurance Exchange, in establishing fire insurance rates, does not allow merit credits to cities and towns in which fire apparatus with pumping units of less than 500 g. p. m. are maintained. Experience has demonstrated that in the majority of Massachusetts communities with a population of 3,000 or less the average risks in such communities are amply protected by one or more pumping units of a capacity of 500 gallons or less.

"It would appear that rather than establish a definite minimum pump capacity for every municipality, the capacity of pumps should be governed by the physical conditions in each community and congestion of risks involved, and that in many localities credit should be given for pumps of lesser capacity, which would amply protect the risks.

"It is assumed that recognition of pumpers of less than 500-gallon capacity would also recognize the use of one and one-half inch hose as standard equipment in establishing ratings, past experience having demonstrated the advantages of one and one-half inch hose.

"We believe that in suburban and farming communities where access to water supply is at times difficult, an apparatus of smaller capacity and consequently less weight is able to be operated more effectively than heavier machines of greater capacity.

"In many instances due to the present financial condition of many towns the purchase of a heavy piece of apparatus would be impossible, and if protection is to be given it must of necessity be of the less expensive type.

"In view of the facts stated above, the ..... hereby endorses the action of the Plymouth County Foresters Association in requesting that consideration of credit for pumping units of less than 500 gallons per minute be given further consideration by the New England Insurance Exchange."

HARRY BELKNAP.

5-Year Program for Detroit

In accordance with a request of Mayor Couzens of Detroit, Mich., that all city department heads draft the capital cost requirements for its division for the next five years, the Fire Commission requested $3,500,000 for new buildings and equipment that would be needed during that period. It explained that it was difficult to predict the exact amount, and that lowered fire losses and increased fireproof building construction, would make the department expenditures less.

The Commission recommended six new fire houses and additions to another. Additional equipment would be needed for the new houses.

Other items included are $1,296,490 for new hydrants and connections to increase the fire protection facilities in the older sections of the city; $1,091,023 for extensions and improvements to the fire alarm system; and $427,500 for extensions to the high pressure system. Also included is $100,000 for a branch telegraph bureau and $40,000 for loud speaker equipment.

Gloucester County Firemen Elect

Alvah Stiles, of Mullica Hill, N. J., was re-elected President of the Gloucester County Fire Chiefs' Association. The other officers are George Walters, Westville, Vice-President; T. Howard May, Woodbury Heights, Secretary, and J. K. Tryon, Pitman, Treasurer.

A special committee was appointed to make recommendations for the removal of fire hazards, including the elimination of gasoline storage tanks that are not in use.

The annual Christmas party will be held at the meeting at Mullica Hill.

Officer Crushed by Wall

A Lieutenant was crushed to death, one fireman died of heart failure, and three others were injured when fire swept a paper-box factory in Baltimore, Md., October 13.

Discovered at 8.33 p.m., the fire reduced half of the factory to a mass of debris in a few hours. Eight companies rolled on the first to find flames bursting from cellar and top floor windows. Four additional alarms were sounded at short intervals.

Thirty minutes after the first alarm, the entire side of the factory collapsed, burying Lieut. James Harrison. He had been discussing the progress of the fire with Chief Engineer Howard Travers and a captain. As the wall buckled they dashed for safety. Lieut. Harrison ran in front of the burning building and tripped over a grating. Before he could rise he was buried under twenty feet of brick and timber. His body was recovered after an hour of digging. The twisted wreckage of a fire escape had to be cut away from above his body before it could be moved. Police at once cleared all fire pass holders from the block, fearing other walls might fall.

Thirty-one companies had the fire down after a three-hour battle, with the force of twenty engines, six trucks, two hose, one chemical, and two water towers. The fire was confined to the double building in which it originated.

A fireman died of heart failure while engaged in putting up hose after the fire was out. The building was occupied by a printer, and a paper box factory. Damage is estimated at $40,000.

OTIS SMITH.

The New Fire Patrol Car No. 2 Placed in Service at Kansas City, Mo.

The Salvage Corps of Kansas City, Mo., has placed in service a White truck with a wheelbase of 160-inch, hydraulic brakes, and an all steel body ten feet long. It carries seventy-five 12 x 18-foot tarpaulins, twelve sacks of sawdust, two sets of ladders, three roof covers, first aid kits, smoke masks, broom, shovels, and the necessary salvage tools. The body was designed by Chief William H. Gardner, of the Kansas City Fire Patrol. All equipment is enclosed with the exception of the covers. During inclement weather the covers are protected by a special waterproof wagon cover.

Westchester Fire Chiefs Discuss Simplifying Parkway Alarms

The November meeting of the Fire Chiefs' Emergency Plan was held in Peekskill, N. Y., on the night of November 17, at the headquarters of Columbian Hose Company.

Chief J. J. McGuire, and Commissioner Rushforth, Peekskill, in the name of the local Fire Department, welcomed the 125 members of the Plan and guests. President Roi B. Woolley, in the chair, introduced a number of visitors, including Assistant Chief Mikkelson and Captain Austin, Pleasantville, and Charles E. Jahn, President of the Westchester County Volunteer Firemen's Association, also Chief Floodquist and Lieutenant Wolf, Briarcliff and a new member, Captain William Paul Babcock, Nyack, N. Y., and his guest, Ray Ackerman.

Chairmen of the newly appointed committees reported on various activities, most important of which is the extension of the work of the Plan to meet other emergencies, such as floods, tornadoes, train wrecks, etc. Captain Howson, Chairman of a sub-committee of the Ways and Means Committee, presented to the members suggestions for better protection of property and life from fire along the several major county parkways. There has existed confusion over the response to alarms of fire transmitted by motorists on the parkways, who had difficulty of knowing in just what community they were located when the fire was discovered. The Plan will endeavor to develop a closer cooperation with the Parkway police system.

President Woolley and Chairman Van de Water, of the Ways and Means Committee spoke of the advisability of gathering and disseminating factual data on fire budgets and other details to make the Plan more valuable to members and to make it more efficient and helpful. In addition to collecting and having available for members, all budgets of the county's departments, the committee will bring up to date the charts and list of all equipment and personnel of the fire service in the different communities.

Chief LeVino, town of Mamaroneck, pointed out the need of keeping newly appointed officers of departments familiar with the code word of the Plan (used in summoning aid) and suggested possible improvements. Captain Cashman, in charge of the Salvage Patrol School, New York City, again invited members to use the facilities of the School and Chief Doughty, Briarcliff, told how his men profited by their training under the tutelage of Captain Cashman.

Nine new members were elected.

The paper of the meeting was read by Assistant Chief Edward Siller, Yonkers, on the subject: "Fires in Mercantile Establishments," which dealt particularly with the hazards in department stores and the best methods of extinguishing fires in such structures.

A letter was read from Chief John Brennan, Pelham Manor Fire Department, regretting his inability to be present and inviting the Plan to meet at his headquarters, Pelham Manor, the third Wednesday in December. A letter was also received from Chief and Commissioner John J. McElligott, New York Fire Department, thanking the Plan for making him an honorary life member.

Following the business session Chief J. J. McGuire and members of the Peekskill department provided refreshments.

Box 52 Observes 25th Anniversary

More than four hundred persons attended the 25th anniversary meeting of the Box 52 Association, Boston, Mass., on November 17 in the Boston Chamber of Commerce Building. The principal speaker was T. Alfred Fleming, National Board of Fire Underwriters.

An informal dinner preceded the meeting. Seated on the speakers' rostrum with President P. Hildreth Parker and Secretary C. Elmer Gane were Mr. Fleming, Chief Samuel J. Pope, Boston Fire Department; Ex-Assistant Chief Thomas F. Dougherty, New York City; Battalion Chief Harold J. Burke, New York City; Percy Bugbee, National Fire Protection Association; Chief Daniel B. Tierney, Arlington, President, International Association of Fire Chiefs; Chief Selden R. Allen, Brookline, and Chief George L. Johnson, Waltham.

Gold buttons were presented to the ten charter members of the Box 52 Association, namely, George W. Austin, Theodore E. Grant, William F. Lehman, Guy Merrill, John A. Molloy, Howard Spaulding, William A. Tighe, Nelson Whitney, Lester Watson, and George Y. Berry.

Harry Belknap, acting for Harold O. Cook, State Forester, who was unable to be present, gave the association a large framed picture of the ruins after the great Boston fire of 1872.

Through the courtesy of the Automobile Insurance Company, Hartford, Conn., the motion pictures "The Bad Master" and "Sounding the Alarm" were shown. Members of the Fire Chiefs' Club of Massachusetts, Rhode Island and New Hampshire and the forest wardens' associations were present as guests of the Box 52.

HARRY BELKNAP.

Cincinnati Fire Fans Honor Assistant Chief Chris Williams

Assistant Chief Chris Williams was honored by the Box 13 Associates, Cincinnati, at their regular November meeting, held at Engine House 45, headquarters for the life squad, on November 10. Among the guests were Assistant Chief Edward Sherwood, Marshals William Hilsinger, J. Flaherty, Daniel Kummer and L. Kuhn, as well as Harry Wernke, the city's new Safety Director. The Entertainment Committee provided a turkey dinner. What it did not provide, but which was very much enjoyed, were two runs during the course of the evening.

Carelessness on Show

As part of its Fire Prevention program, Assistant Chief Taylor of Greeley, Col., dressed up to represent "Carelessness," and appeared at gatherings.

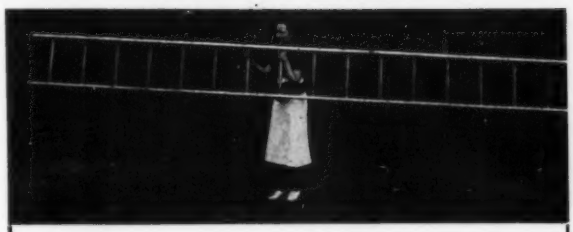
Under the supervision of Chief E. A. Brumley, the men were divided into two groups, one having charge of school programs, and the other service clubs and churches. A radio station, local newspapers, schools and insurance companies cooperated in arranging an effective week of publicity.

Illinois Train Firemen

Sherman V. Coultas, State Fire Marshal of Illinois, has announced a program of fireman training as a newly inaugurated activity of his department. Two deputies have been assigned as Fire Department instructors and are engaged in visiting the departments of the state. They are giving instruction in evolutions, use and care of equipment, life saving, first aid and kindred matters.

"This program will accomplish two valuable purposes," said Mr. Coultas. "It will take elementary instruction to Fire Departments throughout the state, particularly the smaller departments and volunteers. It will enable the Illinois Fire College, held each June at the University of Illinois, to offer advanced courses of training, the need for which has been recognized for some time."

The deputies assigned to this work are Thomas R. Brooks, Clinton, and William Thad Fife, West Frankfort, both former Chiefs. Mr. Coultas states that the work has been received enthusiastically by the departments visited.



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Greater Safety Easier to Handle

For greater Strength, Durability and Economy, specify Aluminum Ladders. They can't rust, splinter, burn or break! Need no painting nor repairs! And cost LESS in the long run. Write for particulars.

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STOP! AN ACCIDENT!

Rush a Homelite—quick—

You can use Homelite portable floodlighting at accidents. Or riots. Or fires. Drownings. Floods. Night repairs. Or any kind of night work, emergency or routine.

For Homelite floodlighting units are compact, light enough for a man to carry. They're easy to rush to a job and set up where most needed. Quick starting and smooth running in the coldest, rainiest weather. Air-cooled gasoline engine is water-proof, trouble-proof—won't flood, freeze or overheat. Thousands are in use. Write for bulletin.

650-watt unit weighs 71 lbs. complete. 1250-watt unit weighs 89 lbs. complete.

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You'll Feel
A HEAP SAFER
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COVER'S DUPOR CHARCOAL RESPIRATOR

$48 Dozen
Sample: $4 postpaid

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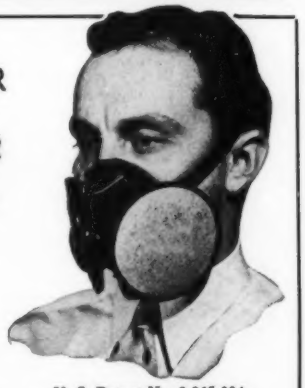

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THE modern pumping engine has many advantages, including better and more powerful motors—better transmissions—better axles—four-wheel brakes—better engineering and, finally, better pumps—far better if it carries a Hale pump.

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Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

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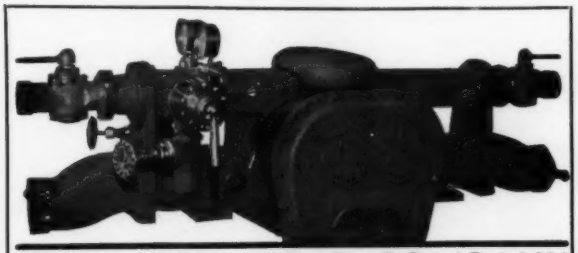

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THE
MORROW CAB FRONT WINDSHIELD
IS A NECESSITY DURING THE COLD WINTER MONTHS

DON'T let illness from exposure while answering alarms reduce your manpower now, when the number of fires is at its peak.
DON'T slow your response to alarms by leaving your drivers unprotected.
DON'T delay in ordering, as we are mighty busy right now.
AVAILABLE FOR ANY APPARATUS. EASILY MOUNTED IN 2 TO 4 HOURS.
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VALUABLE EXCLUSIVE TERRITORY OPEN TO DEALERS

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INCIPIENT FIRES

● Damage by water and chemicals causes higher fire losses. If you are interested in reducing loss figures—try this. Use a LUX carbon-dioxide extinguisher to snuff out all incipient fires. LUX snow-and-gas is the fastest known extinguishing agent. And—most important—LUX is absolutely harmless. Let us send you the new descriptive booklet.

Killing fires with LUX extinguishers means fast action, no "extinguisher damage," no mess. *Next time use LUX.*

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SNUFFS OUT FIRE

Walter Kidde & Co.
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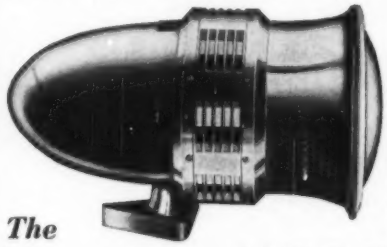
ATTENTION—*EVERYBODY!*



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When buying leader line equipment, see us for prices and particulars on Colt Patent Shut-off Nozzles and Quarter Turn Shut-Off Leader Line Siamese Connections.

Cut shows Colt Little Giant Play Pipe with our patented ladder hook feature used with our regular Colt Shut-off Nozzle. Patented April 28, 1936.

We also manufacture Suction Hose Connections, Gate Valves, Chemical Hose Nozzles and Couplings, Siamese Connections and all sizes of Reducers and Nipples.

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110 VOLTS A. C.
Anywhere
For Operating
FLOOD LIGHTS, PORTABLE SAWS, DRILLS, etc.
350-Watt AC Katolight, Jr., $89.60
Fully Portable, Only 55 pounds
550-Watt AC Plant, $138.00
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Gas-Engine AC & DC Plants up to 10,000 Watts AC & DC Generators
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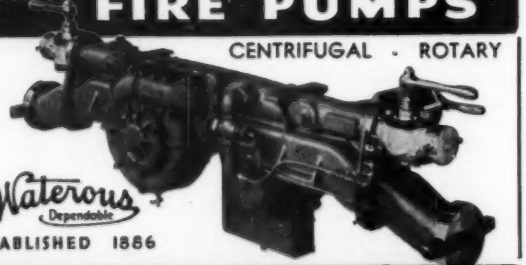
CENTRIFUGAL - ROTARY



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WATEROUS COMPANY - ST. PAUL

FALSE ALARMS

SAD MISTAKE

All his friends were very much puzzled that he could be so much of a ladies' man and still remain a bachelor. Whenever he was chided about this, he explained that for a fire apparatus salesman to be married was very much of a handicap, as he was too much on the go.

In common with a vast army of others, he filled out his income tax blank and sent in the typed form to the proper authorities. When it was checked by the income tax examiner, the examiner saw a return from a bachelor who listed one dependent son. He returned the blank with the questionable entries underlined and wrote:

"This must be a typist's error."

Imagine the examiner's surprise when he saw the blank returned to him, with the following additional note:

"You're telling me!"

When a girl's boy friend is lit up, he's full, but when her parlor is lit up, it's empty.

EVIDENTLY SO

He had just returned from his day off. As large schools of fish had been reported, he had used his day to go fishing, and he was telling the Chief the results. Describing the fish, he said:

"I tell you Chief, it was that long. I never saw such a fish in my life."

"I believe you," said the Chief.

Perhaps you have heard the story of poor Sally Brown whose good name was ruined. She married a fellow by the name of Schlemplewitz.

THEY KEEP TIME

A youngster who was very much attached to his father, asked his mother one evening where his father was.

"He's gone down to the fire hall. There's going to be a smoker, and he's on the committee."

"What's a committee, mother?"

"A committee is a body that keeps minutes and wastes hours."

As the young lady remarked: "If you're not Santa Claus, leave my stockings alone."

NATURAL FUNCTION

In front of the post office, a native was explaining to a summer visitor the outstanding features of the town. He started to describe the Fire Department.

"We have a Fire Department in our town that has only one hose cart and two dogs."

The visitor was very much interested.

"What are the dogs for?"

"To find the hydrants," explained the native.

Love is the only game that is not postponed because of darkness.

HANDICAPPED

A fire apparatus salesman called on the City Council of a small city. In common with most municipalities of that size, the Council met at night, and by the time he had had a chance to talk to most of the members, and had retired for the night, it was very, very late. But early in the morning he was awakened by a knocking on the door of his hotel room.

"What is it?" he shouted.

"Telegram, suh," answered the negro porter.

"Why do you have to wake me up? Why can't you shove it under the door?"

"Can't suh, it's on a tray."

Don't blame a successful man for bragging a bit. No one with a good catch of fish goes home by way of the back alley.

MISPLACED

There was no doubt as to the success of the smoker which the boys put on as part of their annual meeting. One of those who dined well, but who did better with the liquids, had a hard time finding his house.

As he made another attempt to put a key into the lock, a man looked out of the window from the floor above. He shouted:

"Get away, you fool! You're trying to get into the wrong house."

"Fool, yourself," answered the other. "You're looking out of the wrong window."

An appropriate gift to a girl who has no brothers is a one pound box of candy. If she has brothers, add two pounds for each brother.

POOR SANTA

It was the week following Christmas, and the mother of a very large brood of children was surprised to hear the pride of the family utter a word not taught in Sunday school. She was shocked.

"Who taught you that wicked word?" she asked.

"Santa Claus."

"Which Santa Claus?" for in the lives of the poor there are many of the tribe of Santa Claus.

"The Santa Claus at the fire house."

"Santa Claus?" repeated the mother still amazed.

"Yeh, he said it when he fell down the sliding pole."

She could tell he was an experienced driver by the way he bore down on the clutch when he came to curves.

NOT TO BLAME

Considerable interest had been aroused in the arson case that was being heard in court. The one accused was well known in the community, and there was impressive legal talent secured by the defendant.

Much importance was attached to the testimony of one witness.

The lawyer asked him, "Can you repeat the exact words in which the prisoner confessed starting the fire?"

The witness replied, "He said, sir, he started the fire."

The Judge thought he would help out by tring to simplify matters. He asked:

"Did the prisoner say, 'He started the fire,' or 'I started the fire?' "

"Oh, no, your Honor," said the witness. "Your name wasn't even mentioned."

Honesty is the fear of being caught.

—Drawing by "Art" Espey

"Examine my premises? Say, wise guy, you ain't goin' to take no such liberties with me! I'm a lady."

CLASSIFIED ADVERTISING
Bids Wanted, For Sale and Help Wanted $5 *per inch. Position Wanted,* $2.50 *per inch.*

Business For Sale

Good opportunity to acquire well-established fireman's apparel business. Line includes patented quick-hitch bunker suits. Rare proposition for a live-wire. Present owner has too many other interests to give it proper attention. Inquiries will be treated confidentially. Address: Box 20, c/o FIRE ENGINEERING, 24 W. 40th St., New York.

Forest Wardens Meet

At the annual meeting of the Hillsborough County, N. H., Forest Fire Wardens' Association, which was held recently in Milford, the following officers were re-elected by unanimous vote: Chief J. J. Casey, Milford, President; A. L. Martin, Amherst, First Vice-President; John Pearson, Peterborough, Second Vice-President; Herbert C. Leach, Litchfield, Secretary-Treasurer; Chief Albert C. Melendy, Nashua; Harry Cornell, Hudson, and Charles F. Eastman, Weare, Executive Committee.

HARRY BELKNAP.

School for Maryland Volunteers

Free fire instruction classes have been opened for Maryland volunteer firemen. The classes are under the direction of the Fire Extension Service of the University of Maryland.

These classes, which are held in fire stations, consist of a forty-hour course of instruction in all phases of fire fighting and prevention. This includes salvage, ventilation, and inspection. Professor R. B. Criswell, University of Maryland, is the author of the course. Chief John O'Lexey, Jessup, Md., Fire Department, is Regional Instructor for classes near Baltimore city.

OTIS SMITH

Fairfield Chiefs Favor Regional Drill Schools

Meeting in the new Turn-of-River Firehouse in Stamford, Conn., on Wednesday evening, November 15, the Fairfield County Fire Chiefs' Emergency Plan listened to a report made by the Legislative Committee for the organization of a Litchfield County Fire Chiefs' Emergency Plan on Monday evening, November 22. NOTE—An account of the formation of this new "Plan" will be found elsewhere.—EDITOR.

A resolution was passed and given to George Brencher, Vice-President of the Connecticut State Firemen's Association for presentation at a future Executive Committee meeting as follows:

"RESOLVED, that County Vice-President George Brencher be instructed to use every effort to accomplish the following matters at the meeting of the County Vice-Presidents of the State Firemen's Association: 1. To take appropriate measures to secure the additional appropriation necessary to secure the Fairfield County Plan for benefits of $3 per day for seven days a week, as passed by the State Convention in Derby in August. 2. Endorsement of Fairfield County Plan's Bill for Municipal Liability for firemen in the operation of motor apparatus. 3. Endorsement of a Bill appropriating each year a portion of the Foreign Insurance Company's Fund to found a Firemen's Home. 4. Endorsement of a measure to make the conventions of the association more educational by securing speakers of wide experience and knowledge in fire-fighting matters."

The Plan also went on record as favoring the continuance of the Regional Drill Schools and also voted to investigate the "retirement" of the $28,000 appropriation, which the Federal Government was supposed to have appropriated for vocational training in the state of Connecticut. Instructors have paid their own expenses so far, and equipment has had to be borrowed from adjacent towns for the schools.

The meeting was presided over by Bernard Scully of Westport, President.

Sound motion pictures were presented by the Rockwood Sprinkler Company, through Mr. Benson and a demonstration was given of the Voc-Alarm, the latest sound fire alarm transmitting unit of the Gamewell Company, by Russell Glenn.

The next meeting of the Plan will be held one week earlier than usual on December 15 at Bethel, Conn.

New Haven Plan Meets

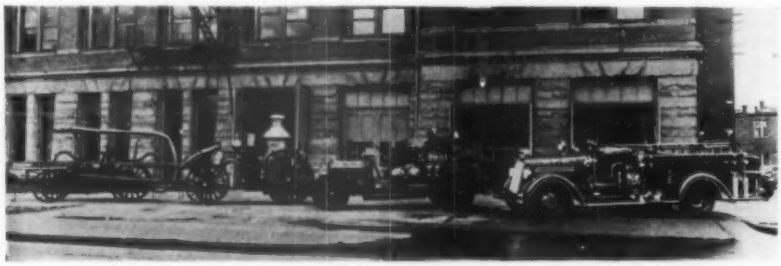
William J. Mahan, Electrical Inspector, for New Haven, Conn., was the principal speaker at the monthly meeting of the New Haven County Fire Chiefs' Emergency Plan, held in the quarters of the Webster Hose Company, Platt Street, Ansonia, November 16. Chief John Pachl, Annex Fire Department, presided at the meeting which was largely attended. Chief James Brett, Ansonia, was host to the visiting fire officials.

Inspector Mahan gave an interesting talk on electrical hazards which may be found while fighting fires in buildings. Nicholas Cavalière, official photographer for Father Hubbard, "The Glacier Priest," gave an illustrated motion picture talk on the various glaciers and icebergs which he found while on a trip with Father Hubbard to Alaska.

Among the guests of the evening who spoke briefly on the success of the Plan were: Mayor Andrew F. Nolan, Ansonia; Fire Commissioners James O'Brien, James Morgan and James McKennen; Fire Surgeon William H. O'Neil, Assistant Chief Michael T. Souney, New Britain, Treasurer of the Connecticut State Firemen's Association, and Chief Michael T. Lawton, Middletown.

The next meeting of the Plan will be held on December 21 in the quarters of the Allingtown Fire Department, West Haven.

THOMAS F. MAGNER.



Eighty Years of Fire Equipment Progress

The line up of fire apparatus at Salem, Ore., marks the progress in apparatus design and manufacture during the past eighty years. When the hand pumper at the left was acquired in 1860, Oregon had just been admitted to statehood. This hand drawn pumper remained in service until the 1880's, about which time the steamer was acquired by a volunteer company. In 1914 the city purchased a motor chemical car as its first piece of motorized equipment. This wagon, now twenty-three years old, remains in active service. The new chemical car at the right was purchased early in 1937.

BEN MAXWELL

Chief L. G. Rodgers, Olean, Dead

Langford G. Rodgers, for nearly twenty-eight years Chief of Fire Department at Olean, N. Y., died at a local clinic at the age of sixty-seven. He had been in failing health for the past two years.

Born in Buffalo, where his father was a member of the Fire Department, he went with his family to Olean forty years ago. For many years Chief Rodgers had engaged in the plumbing and heating business. He was the city's second Chief since the municipality became a city, and he suceeded the late Chief W. H. Simpson, in August, 1917.

He was the oldest charter member and a past Exalted Ruler of the B.P.O.E., and member of the K. of C., and the Order of Eagles.

He is survived by a daughter and two brothers. His wife passed away in 1933.

Nebraska Firemen Association's New Officers

At the 56th annual convention of the Nebraska State Volunteer Firemen's Association, which was held at North Platte, Neb., on October 19 to 21, the officers elected were as follows:

President—Carl Werner, Battle Creek.
First Vice-President—O. P. Burrows, Mitchell.
Second Vice-President—Arthur Bendler, Holdrege.
Secretary-Treasurer (Reelected) — Louis A. Novak, Box 788, Norfolk.

This was one of the best and largest conventions the association has ever held, with registration about 1,400.

* * *

A meeting of a Fire Chiefs' Section of the Nebraska State Volunteer Firemen's Association was held at Omaha, at the same time as the firemen's association. Chief L. L. Haddix, Central City, was chosen to be in charge of next year's meeting, which is to be held in conjunction with the meeting of the Nebraska League of Municipalities, and Chief Arthur Heney, Columbus, was named Secretary-Press Agent.

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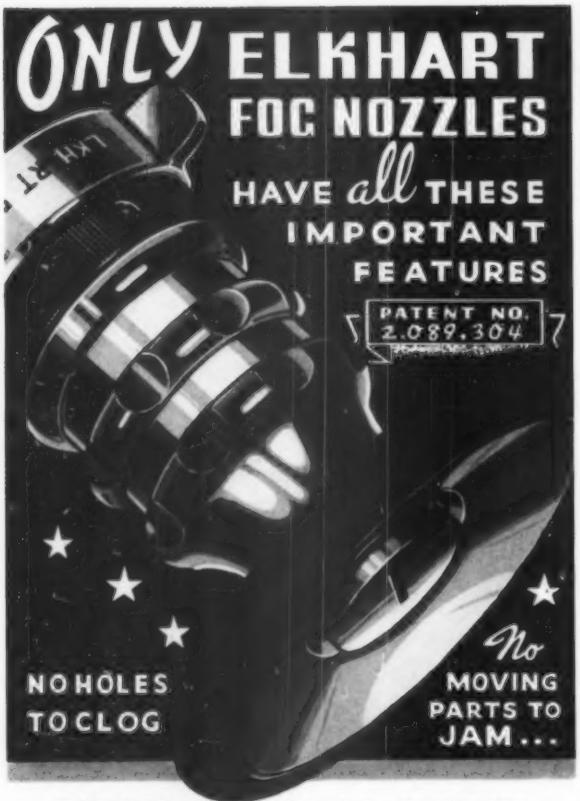

COMPLETE shut-off--will not leak. Smooth action --will not bind. Leak-proof packing compensates for wear. Rubber bumper protects barrel against blows. No engagement screws to fall out. Approved from coast to coast.

Specify ELKHART in your 1938 appropriation...

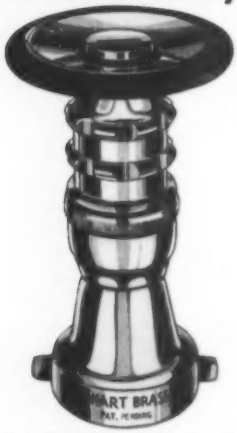

PLATE D-200. The same Mystery Nozzle adapted for direct attachment to 2½" hose. No play pipe necessary.

Make your 1938 budget to permit buying of fog nozzles. But play safe . . . specify genuine Elkhart Mystery Nozzles. There are no substitutes. No other nozzle has all of the essential features. Write or wire for demonstration.

ELKHART BRASS MFG CO
ELKHART INDIANA

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You wouldn't Fight a "B'ar" with a Pop Gun

. . . and so with fire fighting.

Don't attempt to fight fire with anything but the most effective weapons—weapons that you are sure will do the job efficiently. The most commonly used weapon against fire is, of course, water. But to get water on the fire most effectively requires a Fire Hose that will convey it to the spot where it will do the most good. To do this efficiently a Fire Hose should possess these seven outstanding features—

1 Finer grade cable-twisted yarn providing greater burst-resistance without increased weight or bulk.

2 Twill-weave construction giving more resistance to wear and abrasion . . . more flexibility . . . lighter weight . . . no twisting and kinking under pressure.

3 Moisture-proof . . . mildew- and rot-proof . . . no freezing or resultant cracking.

4 A naturally smooth interior free from corrugations—hence greater pressure where you need it . . . at the nozzle.

5 Longer life because of Slow Aging, Scientifically Compounded Rubber Lining.

6 Smooth exterior that glides over and around sharp corners . . . longer useful life of jackets.

7 Easily packed . . . occupies less space.

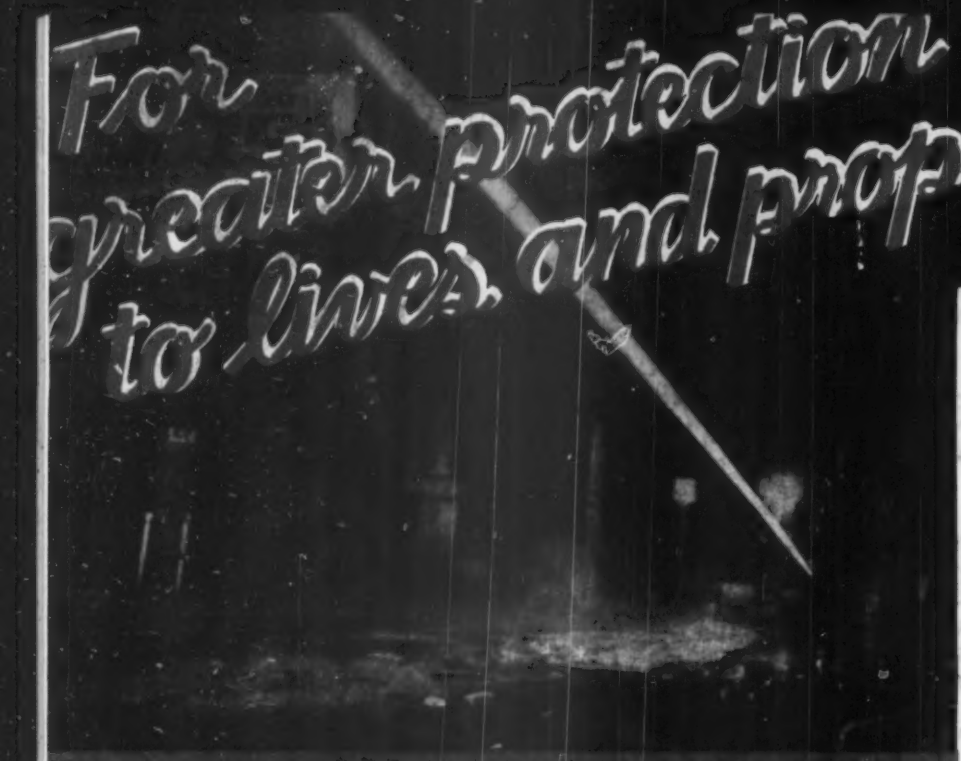
All of these seven features are available . . . but only in ONE Fire Hose—FABRIC WAX AND PARA GUM TREATED FIRE HOSE.

Send for materials for conducting a simple test that will prove to you the superiority of Fabric Wax and Para Gum Treated Fire Hose. Fabric Fire Hose is available only through direct representatives of

FABRIC FIRE HOSE COMPANY

FACTORY • SANDY HOOK CONNECTICUT

For greater protection to lives and property



SPECIFY EUREKA *Streamlined* FIRE HOSE

Multiple Woven construction of Eureka "Streamlined" Fire Hose makes the hose stronger, safer to handle, more dependable in action. The fabric is made circular and each cord is woven into the fabric under uniform suspended weight tension. All plies are bound together into one solid homogeneous fabric by one operation of the loom instead of being separate, as in loose-jacketed hose.

Be Sure of your fire hose

Be Sure that it will stand up under all conditions of service—that it will protect the lives of your firemen and the lives and homes of the people in your community, and lastly, be sure that it's Eureka.

Eureka, with the most complete line of quality fire hose ever made and over 60 years of manufacturing experience, is the largest producer of fire hose in the country. You will be sure, and safe with Eureka.

Call in a Eureka Representative and let him know your hose needs.

**Also, let your Eureka Representative know if you would like one of the Eureka Daily Fire Report Books, or write direct to*

EUREKA FIRE HOSE

Division of United States Rubber Products, Inc

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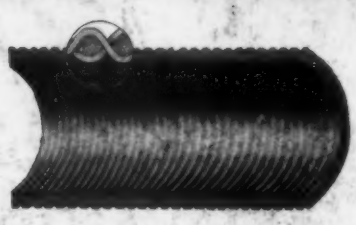
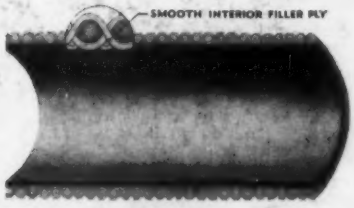


* In the ordinary type of fire hose there is no Smooth-Interior Filler-Ply to fill the valleys in the weave of the inner jacket. As a result, when the hose is subjected to hydraulic pressure, the rubber lining is forced back into these valleys, giving the interior of the hose a corrugated or "washboarded" waterway. The "wash board" condition causes excessive friction loss.



* The Smooth-Interior Filler-Ply is an exclusive Eureka development. An individual set of warp and weft cords completely fills the valleys of the inner jacket, making the surface of that jacket perfectly smooth and level. There are no valleys into which the rubber lining can recede when hydraulic pressure is applied. In Eureka "Streamline" Fire Hose you are always sure of a smooth waterway and a minimum of friction loss.

* Eureka *new* and *better* rubber lining with improved lap-seam . . . 4 plies of specially developed long-lived rubber . . . calendered into one homogeneous body proved far superior by the Bomb Test—a scientific method of predetermining the aging characteristics of rubber goods.

* All Fabrics used in the different brands of Eureka Fire Hose are antiseptically treated to prevent the formation of mildew and rot. The exclusive mildew repellent solution used does not add to the weight of the hose nor make the hose hard to handle.